

THE FINANCIAL *Analysts* *Journal*

Published Every Other Month by THE NATIONAL FEDERATION OF FINANCIAL ANALYSTS SOCIETIES

VOLUME 17 : NUMBER 3

MAY-JUNE 1961

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IN OUR JULY-AUGUST ISSUE

Twenty-five Years From Now, by Edward E. Booher, President of McGraw-Hill Book Co. Also, A Senior Security Investment Plan, by Carlyle J. Plummer; The Dollar Gap, by N. D. Kenadjian; and The Savings and Loan Holding Companies, by M. R. Lefkoe.

Telephones at the grassroots



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Why Celanese is building a new-fiber plant in Germany

❖ Last month Celanese reached an agreement with Farbwerke Hoechst of Germany to build a jointly owned plant within the Common Market to produce and market Darvan, a nitril fiber in Europe.

❖ Darvan is an extremely interesting new chemical fiber with extraordinary warmth and luxury. It was originally developed by a major rubber company. Last year, Celanese bought the world rights to Darvan and since then has worked out a number of technical dyeing and finishing problems that have been retarding its market penetration.

❖ Celanese actions in acquiring, developing and licensing Darvan abroad rather clearly illustrate several fundamental aspects of our operating philosophy.

❖ First, the selection of Darvan is consistent with our concentration on polymer chemistry as our basic technology.

❖ Second, the purchase of a high potential, but not-yet-perfected product makes sense for us. Our research efforts are strongly focussed primarily on application and development. And we are equally as interested in making existing

polymers marketable as we are in creating new "starting materials."

❖ Third, as a new textile fiber, Darvan not only broadens our product range but it utilizes our considerable merchandising know-how in the textile industry.

❖ Finally, and most important of all, are our reasons for going into Germany.

❖ Celanese is extremely world-market minded. We believe there exist highly attractive profit opportunities in many parts of the world for our products and processes.

❖ In the case of Darvan, our market research showed that Europe, to a far greater extent than the United States, is still a wool economy. And there appears to be an even greater opportunity for a superior wool replacement fiber there than in the domestic market.

❖ Darvan in Europe is but one of many examples of Celanese expansion at home and abroad in the field of polymer chemistry.

❖ Celanese Corporation of America, 180 Madison Avenue, New York 16, N. Y. Darvan®

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NEWS FROM THE COLUMBIA GAS SYSTEM

Inter-Office Correspondence

HIGHLIGHTS OF THE 1960 OPERATIONS OF THE COLUMBIA GAS SYSTEM INCLUDE A DRAMATIC "FIRST" IN THE BUSINESS OF DELIVERING NATURAL GAS. IN 1960, THE 10,500-HORSE-POWER THRUST OF AN AIRCRAFT JET ENGINE WAS HARNESSSED TO HELP PUMP 666 MILLION CUBIC FEET OF NATURAL GAS A DAY. THIS IS THE FIRST TIME AN AIRCRAFT JET ENGINE HAS BEEN USED AS A SOURCE OF STATIONARY POWER.

IN 1960, THE COLUMBIA GAS SYSTEM ALSO... EQUIPPED MORE COMPRESSOR AND FIELD PUMPING STATIONS WITH AUTOMATIC CONTROLS... BUILT AN ENTIRE GAS DISTRIBUTION SYSTEM FOR AN OHIO VILLAGE WITH PLASTIC PIPE... BEGAN OPERATION OF THE FIRST LEG OF A MICROWAVE COMMUNICATIONS SYSTEM.

THESE AND MANY MORE INNOVATIONS WERE COMPLETED OR INITIATED IN 1960... IN COLUMBIA GAS SYSTEM'S CONSTANT SEARCH FOR NEW, BETTER AND MORE ECONOMICAL MEANS OF SERVING ITS CUSTOMERS.

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Mark H. Turner
Vice President

CF/gw

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THE FINANCIAL
**Analysts
Journal**

Volume 17, Number 3
May-June, 1961

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Bull Market of October, 1957-196?

by William Kurtz
Paine, Webber, Jackson & Curtis

The paradox of sharply rising stock prices and declining earnings is not new but still creates confusion and head-shaking among Financial Analysts and the public. In this writer's opinion, the market's performance is not out of line with historical relationships.

Essentially, institutional investors have become convinced of an early and sustained upturn in business activity. Such leading economic series as increased bank reserves, construction contracts awarded, prospective increased government expenditures, advanced state of inventory decumulation in the face of high level of final demand suggest an early end to the 1960-1961 recession. Moreover, the new administration's avowed intent of stimulating business to achieve a more aggressive rate of economic growth did not go unnoticed in Wall Street.

President Kennedy frequently mentions the urgent need to modernize our plant and equipment facilities in order to accelerate the country's economic growth rate. Sophisticated investors know that dynamic stock market periods generally go hand in hand with capital spending booms. Our last capital investment peak occurred in 1956-57, coincident with the top of a bull market which started in 1949. The combined impact of determined government stimulation and normal business recovery could generate another boom in capital expenditures during the years 1962-64.

If we are in the early stages of a three-year, rising market, trading volume of five or six million shares daily should not be considered abnormal. Past relationships suggest that present trading activity could readily double by 1964 if we are in a broad market uptrend. At this point it is appropriate to show how past market turning points may be of help in correctly classifying the current equity market scene.

Over the last 70 years, there has been a consistent pattern of major market peaks every nine years, on average. As indicated above, this phenomenon may be related to the nine-year business cycle. We have classified major bull market peaks in 1890, 1899, 1909, 1919, 1929, 1937, 1946 and 1956. Based on historical experience alone, one might expect another top in 1964 or 1965. Moreover, the combined effects of government policy and the passage of time since the last capital spending boom strongly suggest a new investment spending spurt during 1962-64. The stage has been set for the unfolding of a typical nine-year business cycle peak three years from now.

Actually, one need not rely solely on prospective developments in order to properly classify the market's present phase. We have been in a bull market trend since October, 1957. It was interrupted by an interim decline in 1960 and is now in its second stage. As indicated in accompanying table all bull markets have traced out a first peak, an interim decline and a second peak which marked the end of the upward trend. A similar two-stage structure also exists for bear market periods. These various market stages are not so regular in amplitude or in timing that one can get rich by forecasting market movements. They are only useful for classifying the type of market trend in effect at any given time.

For example, we seem to be in the second stage of a bull market that began in October, 1957, but this information alone cannot help us estimate how high the market may go or how long it will continue in its upward

(Continued on page 59)

THE FINANCIAL ANALYSTS JOURNAL is published bimonthly by The National Federation of Financial Analysts Societies, a nonprofit voluntary association devoted to the interests of those engaged in investment management and to the profession of financial security analysis. Editorial communications and articles for publication should be addressed to the managing editor at 82 Beaver Street, New York 5, N. Y. Neither the Federation nor its publication's editorial staff is responsible for facts or opinions contained in articles therein. Copyright 1961 by The National Federation of Financial Analysts Societies. Printed in U. S. A. Articles may be reprinted only by permission of the editors. Indexed in the Business Periodicals Index. Annual subscription \$5, foreign \$5.50; single copies \$1.50, foreign \$1.75. Second class postage paid at New York, N. Y. Address advertising communications, plates, etc. to Grant Webb & Company, 509 Madison Avenue, New York 22, N. Y.

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HIGHLIGHTS

from Marquette's 1960 Annual Report

CEMENT SALES

Down 1.3% from '59 to \$55,130,272. Moderately higher selling prices offset much of the loss from 4.2% less volume.

NET INCOME

Down 0.9% to \$9,404,413 because of a non-recurring net charge of \$337,237. Improved selling prices and further operating efficiencies helped to keep decrease low.

COMMON SHARE EARNINGS

Down 4¢ a share from '59 to \$3.51, after non-recurring charge.

COMMON DIVIDENDS

\$1.80 a share in '60—5.9% more than in '59. Current quarterly rate remains at 45¢.

TAX REFUND CLAIMS

Legislation in '60 nullified tax refund claims aggregating \$16,511,994 and caused us to pay \$7,059,540 for taxes withheld. Latter amount was included in current liabilities.

GROWTH

Four cement plants acquired early in '61 expand our market from 18 states to 29 and annual clinker capacity from 16,970,000 barrels to 23,390,000. After modernization, capacity will rise to 25,040,000 barrels.

1961 PROSPECTS

An estimated 2.2% increase in new construction and expected better general business in the last half could bring about from 3 to 4% more cement use in '61.



*Copies of our
complete Report
for 1960 are
available upon
request. Write
to Director of
Public Relations*

Marquette Cement

MANUFACTURING COMPANY

Executive offices: 20 N. Wacker Drive • Chicago 6, Illinois

One of America's major cement producers

Annual Capacity 24 Million Barrels

Operating fourteen cement producing plants in Illinois, Iowa, Ohio, Missouri, Tennessee, Mississippi, Georgia, Wisconsin, Pennsylvania, New York and Maryland

All on a beam of light!

**New Bell Telephone discoveries suggest
light as a future carrier of vast numbers of
telephone calls, TV shows, data messages!**

Bell Telephone scientists recently transmitted the human voice for the first time on a beam of "coherent" infrared light.

To do this they used their new Optical Maser—a revolutionary device which may someday make light a new medium for telephone, TV and data communications.

Here's why:

Light waves vibrate tens of millions of times faster than ordinary radio waves. Because of these high frequencies, light beams have exciting possibilities for handling enormous amounts of information.

Ordinary light waves—the kind put out by your living room lamp—move like an unruly mob. Coherent light waves move like disciplined soldiers. Theoretically they can be controlled, directed and modulated just as radio waves are now.

The possibilities are breath-taking. Light beams might be transmitted through long pipes, or could someday be just what

are needed for communications in space—for example, between space ships.

Many other uses for coherent light beams are being thought of as Bell Laboratories experiments go forward. Continuing research like this requires adequate telephone company profits so that we can bring you the latest service improvements at the earliest possible time and the lowest possible cost.



Bell Laboratories scientist adjusts new Optical Maser model, first such that operates continuously. Maser uses very little power, transmits narrowest light beam ever achieved. Name stands for "Microwave Amplification by Stimulated Emission of Radiation."



BELL TELEPHONE SYSTEM



The Changing Relationship Between Sales, Rents and Profits

by Eugene M. Lerner and Marvin Schwartz

FOR THE PAST DECADE the rent and lease expenses of food stores have steadily mounted. Latest figures indicate that these charges, as a percentage of sales and as a percentage of profits after taxes, are now at the all time high of 1.26 and .97% respectively, up from .76 and .59% in 1950.

The annual report of National Tea indicates that it covered its rental payments four times in 1950 but less than two and one half times in 1959; Grand Union's coverage dropped from 3.9 to 2.7 times; and American Stores' coverage fell from 4.1 to 2.6 times during the same period. Winn-Dixie and Jewel Tea, however, improved their coverage.

These developments could have widespread repercussions. If the trend toward reduced coverage continues, then only a modest drop in sales arising through a general economic recession or increased competition could jeopardize the quality of food store securities. One consequence would be that borrowing costs would rise, lowering profits still further. Another would be that the securities of food store chains would command a lower price earnings multiple in the capital market.

UNPRECEDENTED GROWTH

The past decade witnessed a period of unprecedented growth in the grocery industry. Combined annual sales of 10 large chains rose from \$7 billion to \$14.1 billion and net profits rose from \$89.2 million to \$181.2 million. The high and rising level of disposable income, the increase in total population, and the shift in population away from congested areas to more suburban sections provided a favorable environment within which aggressive firms could increase their sales.

Food chains responded by closing their old stores and opening newer, larger outlets. Safeway operated 1,998 stores in 1954 and 2,186 in 1960. Food Fair increased its supermarkets from 230 to 430 and National Tea rose from 711 to 900 during the same period. Not all the chains, however, increased their total number of outlets: the A & P, American Stores and Kroger each closed about 300 outlets.

The rise in sales per store showed a more consistent pattern than the change. The statistics are striking: A & P averaged \$683,000 in sales per store in 1950; by 1959 the average climbed to \$1.2 million. Safeway went

from \$578,000 to \$1.1 million. Food Fair, which always had relatively large stores, rose from \$1.3 to \$2 million. This, then, was the most important reason for the continued growth in both dollar sales and profits.

Approximately 17% of this rise in sales per store resulted from the rise in food prices. The greatest proportion of the rise in sales—83%—came because the stores developed the capacity to handle a greater volume of goods. The 1950's marked the end of the Ma and Pa grocery store; the large supermarket with large parking fields became the norm.

These new stores were financed largely through sale-lease-back agreements. Prof. Harry Guthmann has

SUPERMARKETS ABROAD

The sale-lease-back device is a popular method of financing supermarkets abroad as well as at home. The International Basic Economy Corp., a Rockefeller Brothers' privately owned company, uses the instrument to avoid tying up its capital. IBEC operates supermarkets in Venezuela, Argentina, Peru and Italy.

IBEC's supermarkets charge substantially lower prices than the typical small grocery store in these areas. Sales have boomed; and perhaps as a consequence, local authorities in some areas have been slow to issue permits enabling the company to open additional outlets.

Abroad, as at home, the supermarket chains have developed their own sources of supply. This, plus the high turnover of capital, permits low operating margins to generate growing profits.

spelled out the advantages of this kind of financing. It offers the tenant:

(1). Maximum flexibility. Direct ownership of all the stores would involve the repeated flotation of large blocks of securities. Interest charges would be high for there would be periods when the funds would not be fully utilized. Sale-lease-back arrangements avoid these costs through peacemeal financing.

(2). Complete financing. Direct ownership would call for a mortgage plus some of the firm's high cost equity. Tenants, in effect, borrow 100% of the value of the property. Earnings are, therefore, more highly leveraged than they would be under direct ownership. Chains, then, do not tie up their funds in real estate when they rent. During the past decade, real estate values have risen and many supermarkets today com-

Dr. Eugene M. Lerner is Assistant Professor of Economics at The City College of New York. Marvin Schwartz is associated with Neuberger Berman and Company.

mand a market price far in excess of their landlord's book value. By not owning their stores, the chains lost an opportunity to realize capital gains. But if the management of the food chains have greater skill in merchandising food than in speculating on real estate, then, given their limited equity resources, they earned higher returns by concentrating in the area they know best.

(3). Improved balance sheet. Rent is a charge against current income and appears only as a memorandum item on the balance sheet. In spite of their high leverage, the balance sheets of food chains typically indicate little or no fixed indebtedness. As a consequence, both interest and rent charges are lower than they would otherwise be.

(4). Relief from borrowing restrictions. Because of the piecemeal financing and the clean balance sheet, food chains are capable of borrowing larger sums without restrictions than if they were to float a single large bond issue. No single landlord, for example, is likely to impose a working capital requirement or a dividend restriction.

(5). Tax advantages. The net rental under the sale and lease back usually amortizes the landlord's costs of investment over the period of the lease. The rental payments are frequently large enough to amortize the cost of land as well as the building. If rental payments are larger than depreciation charges, accelerated depreciation may in effect take place. The full scope of these benefits will depend upon the terms of the lease.

In addition to these financial advantages, renting also increases a chain's operating flexibility. Neighborhoods change and the shift in population influences the earning power of a particular store. As a tenant, the chain can easily leave undesirable neighborhoods when the lease expires, and move to more attractive areas. Conversely, if the neighborhood improves, the chain can usually exercise an option and extend the lease. Moreover, supermarkets themselves become obsolete at a rapid rate. A parking lot with a capacity for 20 cars may have been adequate in 1950; it is ludicrous in 1961. The area within the store itself has also increased markedly.

For a multiplicity of reasons, then, food stores prefer to rent. They have been able to utilize the sale-lease back device and thereby assume the fixed charges without restrictions because of their historic stability and growth of sales and earnings. Like a public utility, they have been able to leverage their earnings and thereby enjoy a higher rate of return on their equity. But unlike a utility, food stores operate within a highly competitive industry. Have the food chains found the sale-lease back so congenial a financing instrument that they have used it to overextend themselves? The following data was assembled to help provide an answer.

Financial Margins

Gross operating margins have risen every year since 1950. (Table 1.) Kroger's gross profit margin of 20.3% in 1959 was the highest of the firms studied.

Table 1
Gross and Net Profits as a Percentage of Sales

Year	Gross Profit		Net Profit 10 Stores
	9 Stores (Excluding A. & P.)	10 Stores (Including A. & P.)	
1950	15.6%		1.28%
1951	14.5		.94
1952	15.1		.90
1953	15.7		.97
1954	15.9		.97
1955	16.1	14.9%	1.03
1956		15.0	1.20
1957		16.6	1.28
1958		17.0	1.28
1959		17.6	1.29

Source: Annual Reports of various companies.

Grand Union's and Safeway's margins were 19.7 and 19.6%, respectively. Both A & P and First National, with little more than 15%, had the lowest gross operating margins.

In spite of the steady secular rise in gross profit margins for the 10 firms combined, net margins after taxes were virtually identical in both 1950 and 1959. The secular improvement in gross profits, then, was not successfully carried down to net income.

Data in Table 2 show one reason why net profits as a percentage of sales remained stable though gross profits rose. Between 1950 and 1959, rent and lease expenses tripled.

The improvement in gross profits permitted the times-rent-earned statistic to remain virtually stable for the 10 firms combined at 3½ times from 1950 through 1957. The coverage fell in 1958 and 1959, and preliminary data for 1960 indicate the drop in coverage will continue.

In 1959, coverage for individual firms ranged from over 5 to under 2.5 times. Winn-Dixie and Jewel were the industry leaders; Grand Union and National Tea the laggards.

The margin of safety is a concept employed by Financial Analysts to indicate how much sales can fall before a particular fixed charge is no longer covered, if there is no corresponding reduction in operating expenses. The term is usually applied to the coverage of interest payments in order to determine the quality of a bond. The concept can, however, be applied to rent and lease expenses because they too are fixed and mandatory charges.

For the industry as a whole, the margin of safety has been rising. The dispersion among individual firms, however, is very great. Winn-Dixie, for example, could sustain a 4.5% drop in sales and still meet the rent bill even if there were no corresponding drop in operating expenses. National Tea, however, could sustain only a 2.2% decline in sales. The correspondence between times-rent-earned and the margin of safety is close but not perfect.

But costs will rise as sales decline. If the gross profit margins for all stores were 20%, then for every

W. R. GRACE & co. reports on 1960

Earnings for 1960 of \$16.2 million were slightly below 1959. However, chemical profits were up 11%, the third consecutive year of higher chemical sales and earnings. Chemicals accounted for over 75% of pre-tax operating earnings. This improvement reflects the new products resulting from research as well as the increased capacity and efficiency generated by the \$100 million expansion in chemical facilities over the past five years.

In the growing packaging field, Cryovac bags and films as well as a wide range of sealing compounds give Grace an important world-wide position. In plastics, the capacity of our polyethylene plant is being increased and sales continue to rise sharply. Cosden Petroleum Corporation, 53%-owned subsidiary, has also expanded in chemicals. The demand for agricultural chemicals has also risen.

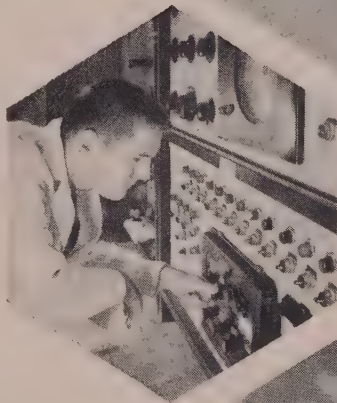
Earnings increased from our diversified Latin American business. However, difficult conditions continued in the shipping industry and Grace Line operated at a loss for the first time since 1932. We expect improvement in this situation.

In our Libyan petroleum operations, in which we are associated with Standard Oil Company (New Jersey), and Texas Gulf Producing Company, two successful wells in an entirely new area were brought in during 1960.



For a copy of the Company's 1960 Annual Report, write to the Public Relations Department, 3 Hanover Square, New York 4, N. Y.

...marked rise in
chemical sales
and earnings



Highlights of the Year's Operations

Year Ended December 31	1960	1959
Sales and Operating Revenues.....	\$552,870,918	\$476,789,610
Net Income After Taxes.....	\$ 16,220,381	\$ 16,466,440
Per Share of Common Stock.....	\$ 3.22	\$ 3.35
Cash Dividends Paid:		
Preferred Stock	\$ 928,664	\$ 928,664
Common Stock	\$ 7,579,657	\$ 7,343,155
Per Share — at rate of.....	\$ 1.60	\$ 1.60
Stock Dividend Paid on Common.....	2%	2%
Net Working Capital.....	\$133,052,482	\$138,135,774
Current Ratio	2.3 to 1	2.5 to 1
Net Fixed Assets.....	\$275,331,819	\$232,735,277
Stockholders' Equity per Common Share.....	\$ 49.28	\$ 48.89
Number of Common Shares Outstanding.....	4,874,816	4,771,540
Number of Common Stockholders.....	31,306	30,052
Number of Employees.....	40,600	41,000

W. R. GRACE & co.

Executive Offices: 7 Hanover Square, New York 5, N. Y.

GRACE

Table 2

Times Rent Earned and Margin of Safety for Ten Firms Combined

(in \$000,000)

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
1. Gross Sales	7,040	7,956	8,646	9,270	9,761	10,529	11,573	12,528	13,459	13,963
2. Net Profits Before Rent and Taxes	226	211	244	283	294	324	404	474	492	552
3. Rent and Lease Expense	53	60	74	83	89	98	117	133	155	176
4. Balance (2) - (3)	173	151	170	200	205	226	287	341	337	376
5. Times Rent Earned (2) + (3)	4.3×	3.5×	3.3×	3.4×	3.3×	3.3×	3.4×	3.6×	3.2×	3.1×
6. Margin of Safety (4) + (1)	2.5%	1.9%	2.0%	2.2%	2.1%	2.1%	2.5%	2.7%	2.5%	2.7%

dollar that sales declined, costs would fall by 80 cents. Under this set of conditions, the margin of safety would be greater than the figures indicated in Table 3 by a factor of five. Winn-Dixie could sustain a 22% drop in sales; Jewel Tea a 19%; Grand Union a 12%; and National Tea an 11% decline before profits fell to zero. These figures are overstated because the average margin is not as high as 20% and because the marginal dollar in sales earns more profit than the average dollar.

The food chains have found the sale-lease-back a congenial financing device and have used it to build ever larger and more attractive stores. Rental charges as a consequence have mounted to a startling extent. The rise in gross profit margins have enabled the industry as a whole to meet its rental payments by a comfortable margin. In individual companies, adverse trends are found. In all cases, however, the margin of safety, the amount by which sales can fall without jeopardizing profits, is quite modest.

The Ma and Pa stores have been displaced, and they cannot be displaced again. One source of future sales gains is therefore gone. Once a new supermarket is built, it in turn becomes vulnerable to the competition of an even newer, larger, and more attractive store being located nearby. Each new competitor need capture only from 10 to 20% of the sales to leave the average supermarket close to or behind its break-even point.

Market Valuation

There is fragmentary evidence that the unfolding development in the relationship between rents and profits is recognized in the market place. In the past, the market price of food stocks outperformed the Dow-Jones Industrial Average during periods of contraction (See Table 4). Between January and September, 1953, for example, the Dow-Jones average fell by 15%. Market values of the 10 major food chains, however, rose by 4%.

Between April, 1956, and October, 1957, the Dow-Jones average fell by 22%. Once again food stocks

Table 3

Times Rent Covered and Margin of Safety for Ten Food Chains in Fiscal 1959

	Times Rent Earned	Margin of Safety
Winn-Dixie	5.0	.045%
Jewel	4.8	.038
First National	4.7	.032
Food Fair	4.1	.028
A. & P.	3.9	.021
Kroger	3.1	.029
Safeway	3.0	.032
American Stores	2.8	.022
Grand Union	2.6	.025
National Tea	2.4	.022

Table 4

The Percentage Change in the Dow-Jones Industrial Average and 10 Food Chains During Selected Periods

	From Jan. 1953 to Sept. 1953	From April, 1956 to Oct. 1957	From Jan. 1960 to Oct. 1960
Dow-Jones	-15.9%	- 2.2%	- 7.8%
American Stores	0.0	+13.4	-17.3
First National	+ 9.1	-10.7	-18.3
Food Fair	+ 7.7	-35.9	- 6.3
Grand Union	0.0	+12.2	-15.9
Jewel Tea	- 5.0	+11.6	-12.0
Kroger	+ 3.7	+28.1	-18.5
National Tea	+ 5.8	0.0	-26.8
Winn-Dixie	+11.0	+ 8.3	+21.0
Safeway	+ 8.7	+30.0	- 9.5
A. & P.	0.0	+ 5.5	-17.9
Average	+ 4.1	+ 6.3	-12.2

rose, this time by 6%. But this trend has now been reversed. Between January and October, 1960, Dow-Jones fell by 18% and food stores declined 12%. If Winn-Dixie were excluded from the computation, food stores declined 16%.

Whether food chains will be able to improve their net profit margins and reverse the trend that is developing remains to be seen. Preliminary data for 1961 indicates that the reversal has not, as yet, begun.

Looking Ahead With Armco

Armco Steps Up Plant Improvement Program in 1961

Armco's long-range program for improving operating efficiency and broadening product lines will move ahead at a stepped-up pace in 1961.

With benefits from earlier capital investments already being realized, Armco is planning to increase capital spending by 67% over the 1960 rate.

Major projects are under way at almost every location where Armco produces steel and steel products. The Armco Division is installing a new continuous coating line (the world's largest) at Middletown, Ohio; new stainless steel facilities at Butler, Pa.; new warehousing facilities at Baltimore, Md.; new processing and finishing equipment at Ashland, Ky.



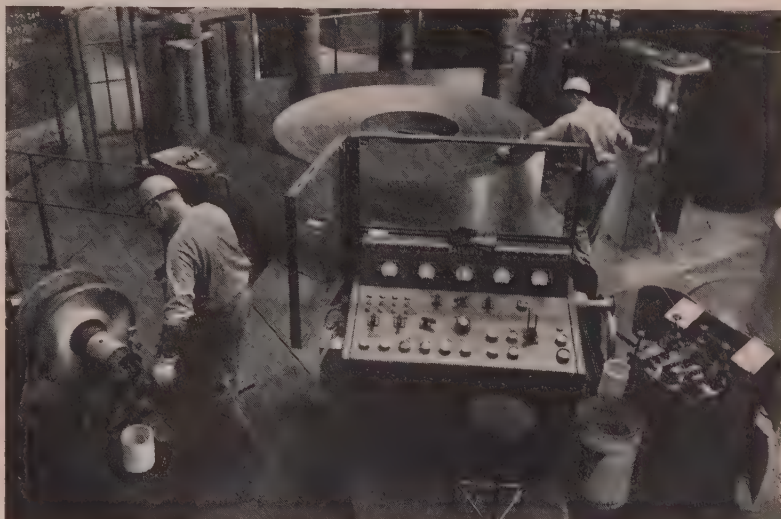
This Steelmark says a product is made of modern, dependable steel. Use it on products you make; look for it on products you buy.

Armco's National Supply Division is beginning work on a major pipe mill at Ambridge, Pa. The Sheffield Division is building a combination slabbing and plate mill at Houston, Texas. New spiral welded pipe facilities for Armco Drainage & Metal Products will be under construction at Middletown.

A plant to produce alloy steel grinding balls for nearby copper mines will be completed in Chile this year. Armco Chile S.A.—a new corporation formed by Armco International Division and Compania Electro Metalurgica S.A. of Santiago—will operate the plant.

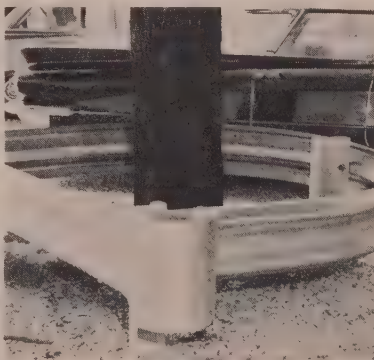
Growing demands for special steels that meet more exacting requirements are behind much of this building program. Greater efficiency in production will be another result.

Research on new products and the processes to make them will continue to receive highest priority at Armco.



New Econo-Beam Guardrail Has Many Off-Highway Uses

A new light-gage guardrail for such non-highway uses as parking lots, drive-in restaurants and similar applications has been introduced by Armco Drainage & Metal Products.



Called Econo-Beam, it is galvanized on both sides and does not require painting to protect it against the weather. It is spliced with just four bolts, instead of the eight used for regular highway guardrail. Lightweight sections are fastened to steel, timber or concrete posts by a single bolt.



Armco "Graduate" Course Develops Management Skill

Development of management from within the corporation has always been an Armco policy, and a new Armco-developed program, "The Profession of Management," has an important role.

Armco managers at all levels are studying the principles of scientific management as they relate to Armco.

Managers attend a series of seven film showings. Each showing is followed by conference sessions in which specific principles are applied to local problems. Armco Steel Corporation, General Offices, Middletown, Ohio.



ROCKWELL-STANDARD CORPORATION

Intensified Expansion Program in 1960

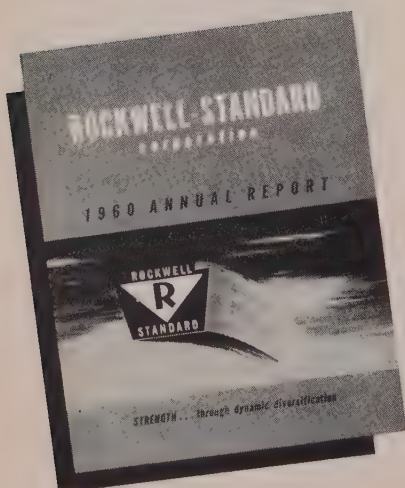
STEPS TAKEN TO FURTHER STRENGTHEN ITS POSITION DESPITE GENERAL ECONOMIC DECLINE:

- **ACTIVATED** greatly enlarged and newly centralized research center in Birmingham, Michigan.
- **COMPLETED** new universal joint plant in Fairfield, Iowa.
- **ENTERED** Australian market through affiliation with I. E. L.-Rockwell Pty. Ltd.
- **ADDED** Companhia Teperman de Estofamentos, and Ibesa-Rockwell Metalurgica Ltda. as manufacturing affiliations in Brazil.
- **EXPANDED** investment in Cobrasma-Rockwell Eixos S. A., already large Brazilian axle manufacturing operation.
- **LICENSED** Diesel Nacional, S.A. in Mexico.
- **ENTERED** Argentine market through arranging to license and acquire an interest in Artimsa S.A.I.C.

Add to this progress in planned expansion, those factors that reflect the enormous financial strength and stability of the Company and you will understand why our annual report is titled **STRENGTH . . . THROUGH DYNAMIC DIVERSIFICATION.**

ANNUAL REPORT HIGHLIGHTS

	1960	1959	1958
	in millions		
Net Sales	\$248.3	284.1	204.5
Net income	\$ 13.0	19.1	9.1
Cash Dividends	\$ 10.8	10.6	10.2
Working capital	\$ 60.9	60.4	56.5
Shareholders' equity	\$131.8	129.9	115.3
Outstanding shares	5.4	5.4	5.2
	per share		
Net income	\$ 2.41	3.61	1.75
Total cash flow	\$ 4.18	5.30	3.55
Cash dividends	\$ 2.00	2.00	2.00
	in percentage		
Net income:			
on sales	5.2%	6.7%	4.4%
on shareholders' equity	9.97	16.18	7.84
	other facts		
Shareholders of record	30,509	30,099	29,102
No borrowed funds—short or long-term			



For the complete story,
ask your broker for a copy
or write to: Secretary,
Rockwell-Standard Corporation
Coraopolis, Pa.

ROCKWELL-STANDARD
CORPORATION



GENERAL OFFICES: CORAOPOLIS, PENNSYLVANIA

An Effective Yardstick of Common Stock Value

by Joel H. Hirsch

TWO QUESTIONS WHICH SHOULD BE CONSIDERED IN EVERY PURCHASE OF COMMON STOCKS ARE:

1. Is the company stable, soundly financed and reasonably certain of continuing in business?
2. Is the stock properly priced in relation to its underlying value?

It is an interesting commentary on human nature—and the stock market is a numerical picture of human nature with its hopes and fears—that a great amount of effort and study is usually devoted to the first question, while the second is either given the most cursory treatment or wholly ignored.

This difference in emphasis is reflected in the fact that vast numbers of individuals and some 16,000 investment clubs spend tremendous amounts of time and effort trying to find appropriate companies in which to invest, usually rediscovering and reanalyzing statistics on business performance to arrive at opinions on company soundness that could have been acquired from the published ratings and reports of any one of several excellent financial services. On the other hand, so little attention is devoted to trying to find out whether the stock is reasonably priced in relation to its underlying value that only one financial service provides any quantitative approach to this side of the problem, and the timeworn Price-Earnings Ratio with all its crudities and inadequacies is still the accepted criterion for pricing stock purchases. It is the purpose of this article to present an effective statistical yardstick for measuring the underlying value of common stocks as a means of making sophisticated purchase decisions. This procedure is offered, not primarily as a way to make money in the stock market, but rather as a way to keep from losing it.

This yardstick or measure of value has resulted from study of a large volume of data on the behavior of common stocks, employing the latest statistical techniques. It was found that a relatively high degree of correlation exists between yearly average stock prices and annual earnings and dividends. By means of a system of ratios, discussed subsequently, it has been possible to generalize the correlation and make it applicable to a wide range of stocks over a considerable period of time.

Joel H. Hirsch has had a distinguished career in the industrial world. He holds chemical engineering degrees from the State University of Iowa, B.S., and the Massachusetts Institute of Technology, M.S. For eight years he was associated with Luis de Florez, consulting petroleum engineer in New York, and for several years was associated with Foster Wheeler Corp. Presently Mr. Hirsch is director of an engineering division in a large industrial research laboratory.

This correlation is expressed by the following equation:

$$(a) R_c = 0.3946 + 0.5205 R_E R_D$$

Where:

$$R_E = \text{Ratio: } \frac{\text{Yearly Earnings}}{\text{18-Year Average Earnings}}$$

$$R_D = \text{Ratio: } \frac{\text{Yearly Dividends}}{\text{18-Year Average Dividends}}$$

$$R_c = \text{"Calculated" Ratio: } \frac{\text{Yearly Average Stock Price}}{\text{18-Year Average Stock Price}}$$

The underlying value (U) of a stock is calculated from the following equation:

$$(b) U = R_c P_{avg}$$

Where: U = Underlying Value (\$/Share)

P_{avg} = 18-Year Average Stock Price (\$/Share)

R_c as defined above

A graphical solution of Equation (a) is given in *Figure 1* and a sample calculation illustrating the complete procedure is included in the Appendix.

Equation (a) above has been developed from data on 122 stocks for an 18-year period from 1941 through 1958 (the latest year for which complete data were available). An 18-year period was selected to insure inclusion of a number of years when stock prices were low. One and perhaps two complete price cycles occurred during this period, with prices rising from about 1942 to 1946, falling from about 1946 to 1949, and generally rising (with some lesser regressions in 1954 and 1957) from 1949 until recently. To obtain data for a period of this length imposed some difficulties. More recent limited studies indicate that a 10-12 year period might have been adequate.

The basis for selecting the 122 stocks correlated was somewhat arbitrary, representing a group that was of interest to the author because of the stocks' general high quality and favorable tax status in his home state. It was desired to have a sufficiently large sample to insure reliability of the correlations, and it is believed that the number included amply fulfills that requirement. It can be said with some assurance that any other group of 100 high-grade stocks would have provided correlation coefficients closely approximating those found in this study. In one instance, the correlation coefficients were developed for successively larger groups of stocks, comprising 10, 24, 45, and 122 stocks, with relatively little change in the coefficients. In fact, the coefficients for

Table I

CALCULATED UNDERLYING VALUES OF 122 COMMON STOCKS

Stock	18-Year Averages (1941-58) (\$/Share)				Algebraic Avg.	Positive				Maximum Deviations				Negative				1958 Data (\$/Share)	Deviation
	Earnings (R Avg)	Dividends (D Avg)	Price (P Avg)	Standard Deviation (%)		Year	Calculated Value (U)	Price Deviation (%)	Year	Calculated Value (U)	Price Deviation (%)	Year	Calculated Value (U)	Price Deviation (%)	Earnings (R)	Dividends (D)	Value (U)		
Abbott Laboratories	2.226	1.441	35.91	16.28	-1.81	'52	39.08	35.3	'42	'42	16.10	-30.6	3.32	1.90	50.92	57.77	13.4		
Addressograph-Mult.	1.503	0.704	16.47	34.33	-16.90	'57	23.21	39.1	'42	'42	7.77	-60.5	3.16	1.28	50.92	54.35	38.5		
Air Reduction	2.702	1.632	36.11	26.21	8.36	'46	24.86	93.6	'42	'42	27.68	-12.3	3.47	2.50	61.29	62.11	21.3		
Allied Chemical Corp.	3.504	2.304	58.14	19.03	3.37	'56	74.65	41.6	'49	'49	56.45	-25.3	3.41	3.00	61.29	82.86	35.2		
Alpha Portland Cement	1.531	0.871	15.90	20.72	-8.80	'55	27.40	29.1	'49	'49	17.30	-40.8	2.79	1.50	32.28	34.60	7.2		
Aluminum Co. of Am.	2.165	0.704	31.21	46.69	-13.58	'58	37.37	106.7	'42	'42	20.20	-61.2	1.96	1.20	37.37	37.22	106.7		
American Brake Shoe	3.803	2.264	37.24	34.57	13.16	'45	22.39	89.4	'56	'56	58.04	-26.8	2.97	2.40	30.74	39.20	27.5		
American Can	2.117	1.228	29.60	24.39	7.60	'46	14.35	64.4	'50	'50	36.30	-40.4	2.78	2.00	44.64	46.98	5.2		
American Cyanamid	1.304	0.755	20.15	17.91	-3.67	'46	10.91	23.9	'50	'50	29.04	-44.2	1.91	1.60	40.50	47.18	16.5		
Amer. Home Products	1.918	1.194	56.72	20.86	-14.05	'46	14.30	19.9	'50	'50	29.04	-44.2	5.53	3.55	129.75	100.65	-22.4		
Amer. Tel. & Tel.	3.636	3.000	53.76	14.98	9.77	'45	44.07	32.3	'42	'42	43.76	-7.7	4.67	3.00	57.15	61.17	7.0		
Anchor Hocking	1.374	0.642	12.24	21.50	-2.38	'45	5.93	42.2	'50	'50	18.13	-39.1	2.55	1.15	25.99	27.03	4.0		
Atlantic Refining	3.121	1.166	22.26	23.52	-6.02	'57	33.10	39.6	'41	'41	12.45	-37.8	3.80	2.40	31.77	38.99	22.8		
Atlas Powder	3.388	1.865	40.27	23.54	6.70	'46	21.74	72.2	'50	'50	48.40	-38.4	3.61	2.00	46.15	64.60	40.0		
Bearrice Foods	2.497	1.232	21.69	22.64	0.54	'58	32.68	34.3	'49	'49	29.47	-43.3	3.65	1.80	32.68	43.90	34.3		
Beech-Nut Life Savers	2.027	1.306	27.09	27.69	12.18	'46	17.98	67.4	'48	'48	37.65	-22.7	2.52	1.55	31.50	34.78	10.4		
Bendix Aviation	3.477	1.678	27.34	24.23	0.10	'58	35.26	43.5	'50	'50	29.11	-36.4	2.18	2.40	35.26	50.58	43.5		
Best & Co.	2.902	1.761	26.25	18.91	6.86	'45	19.22	36.8	'48	'48	35.82	-25.6	4.93	2.00	26.03	33.70	29.5		
Black & Decker Mfg.	2.433	0.952	17.69	29.02	-2.99	'58	26.46	60.0	'50	'50	18.62	-39.7	3.16	1.55	26.46	42.34	60.0		
Borden Co.	3.639	2.153	42.16	14.79	3.31	'55	50.01	24.0	'41	'41	22.24	-21.7	5.06	2.80	56.31	69.32	23.1		
Borg-Warner	2.682	1.388	22.07	20.25	9.86	'58	16.01	52.7	'41	'41	10.92	-43.2	2.36	2.00	33.16	31.36	35.4		
Burroughs Corp.	1.436	0.800	19.20	50.25	-13.11	'58	60.22	18.5	'50	'50	42.38	-40.4	3.48	2.40	60.22	71.34	18.5		
Caterpillar Tractor	2.339	1.089	28.65	22.86	-13.11	'58	60.22	18.5	'50	'50	42.38	-40.4	3.48	2.40	60.22	71.34	18.5		
Chesapeake & Ohio	4.942	3.126	43.92	31.93	11.72	'45	26.84	97.8	'41	'41	47.53	-20.5	6.36	4.00	54.99	58.51	6.4		
Chi. Pneumatic Tool	1.404	0.928	37.87	23.34	9.69	'52	33.77	48.1	'49	'49	40.77	-52.2	1.72	1.12	14.51	24.35	67.8		
Columbian Carbon	2.922	1.928	28.98	33.58	-12.42	'58	14.51	47.8	'42	'42	41.50	-20.5	2.22	2.40	33.59	39.52	17.7		
Continental Can	2.093	1.012	25.80	26.88	4.59	'45	13.13	70.0	'50	'50	24.58	-27.1	3.51	1.80	33.59	39.52	17.7		
Continental Oil (Del.)	1.752	0.942	23.98	34.47	-12.17	'57	38.28	49.2	'41	'41	11.03	-49.6	2.41	1.60	50.25	49.84	-0.8		
Corn Products Co.	1.696	0.718	30.43	18.82	8.36	'45	13.76	49.9	'41	'41	28.30	-24.3	2.89	1.85	42.59	43.35	1.8		
Corning Glass	1.369	0.718	30.43	18.82	-18.43	'58	72.94	70.6	'50	'50	45.66	-68.6	2.32	1.50	72.94	87.95	20.6		
Diamond Alkali	2.051	1.206	29.78	27.02	8.45	'46	18.08	45.2	'50	'50	23.38	-17.1	2.32	1.80	37.92	37.35	-1.5		
Diamond Gardner	2.051	1.206	29.78	27.02	10.36	'45	14.31	58.2	'50	'50	44.85	-45.4	1.92	1.50	23.99	30.91	28.9		
Dow Chemical	1.151	0.565	24.98	21.70	-14.11	'57	59.25	11.5	'50	'50	25.37	-38.9	1.78	1.20	52.59	56.60	7.6		
duPont de Nemours	4.543	3.546	91.28	18.99	-9.61	'58	164.31	15.2	'50	'50	140.00	-47.3	7.25	6.00	164.31	189.23	15.2		
Elec. Storage Battery	3.024	1.839	32.02	37.14	18.99	'45	22.56	70.7	'48	'48	60.54	-30.7	2.38	2.00	26.90	32.84	22.1		
Firestone Tire & Rub.	4.012	1.349	29.85	38.42	-20.77	'58	58.34	53.7	'42	'42	13.03	-69.4	6.36	2.55	58.34	89.68	53.7		
Food Mach. & Chem.	1.688	0.693	18.94	22.81	-2.40	'46	13.54	56.1	'41	'41	10.07	-43.5	2.39	1.05	28.62	35.00	22.3		
General Electric	1.527	1.044	25.95	22.38	-9.22	'55	43.66	18.0	'50	'50	29.39	-46.9	2.42	2.00	57.35	63.66	11.0		
General Foods	2.263	1.265	29.12	16.49	4.16	'45	16.49	38.1	'49	'49	40.31	-32.1	4.78	2.30	65.32	63.76	11.7		
General Mills	2.159	1.159	30.13	17.09	6.44	'46	32.23	45.4	'48	'48	58.20	-60.4	3.00	2.00	71.97	63.56	11.7		
General Motors	4.130	2.159	50.13	28.17	-5.51	'58	27.97	47.6	'50	'50	36.24	-60.4	2.22	2.00	27.97	41.29	47.6		
General Refractories	1.857	1.171	15.20	29.07	-5.51	'58	25.48	51.4	'50	'50	14.63	-78.5	3.59	2.00	25.48	38.59	51.4		
Goodrich (R.F.) Co.	2.382	0.969	16.04	24.46	-7.13	'58	58.03	35.9	'41	'41	12.54	-67.3	2.53	2.00	48.97	65.73	33.9		
Goodyear Tire & Rub.	3.072	1.119	26.63	43.29	-21.92	'56	62.24	67.2	'42	'42	11.64	-25.1	3.71	2.00	37.61	35.53	33.9		
Grant (W.T.) Co.	2.919	1.408	28.19	21.57	6.86	'45	15.41	67.2	'46	'46	45.21	-67.3	3.00	1.80	33.09	35.53	33.9		
Gulf Oil Corp.	1.499	0.434	13.53	22.01	-11.88	'56	27.07	19.1	'42	'42	5.92	-36.4	3.29	1.69	23.07	24.52	3.1		
Harb.-Walk. Refrac.	1.817	0.934	15.14	22.06	-0.10	'45	7.04	50.1	'50	'50	17.67	-38.9	2.84	1.80	29.70	35.50	19.5		
Hercules Powder	1.369	0.799	23.39	21.16	1.67	'46	14.85	36.7	'50	'50	30.89	-40.4	2.04	1.10	34.19	45.49	33.0		
Hershey Chocolate	3.668	1.897	34.56	23.25	4.57	'54	27.86	47.1	'42	'42	18.11	-33.4	5.25	3.15	56.40	61.43	8.9		
Household Finance	1.416	0.744	14.66	19.66	-3.61	'56	19.96	26.6	'42	'42	7.78	-47.8	2.53	1.14	26.68	33.40	25.2		
Ingersoll-Rand	2.950	2.038	33.63	15.59	-4.65	'58	64.06	24.9	'50	'50	30.49	-24.3	4.36	4.00	64.06	80.00	24.9		
Int. Business Mach.	2.256	0.764	60.56	39.66	-26.53	'57	154.72	21.6	'42	'42	27.39	-70.9	6.93	2.00	28.79	32.82	14.0		
International Harvester	2.889	1.590	28.67	35.45	12.21	'46	15.53	96.7	'50	'50	41.98	-32.5	2.69	2.00	28.79	32.82	14.0		
International Salt	4.865	2.611	49.95	15.79	-8.04	'46	26.05	17.1	'54	'54	90.20	-34.1	8.81	4.75	105.36	118.94	12.9		
International Shoe	2.639	2.261	39.04	27.42	11.72	'46	28.94	75.9	'48	'48	56.98	-25.7	2.25	2.10	31.50	35.33	12.2		
Jewel Tea Co.	1.333	0.738	16.18	19.82	-8.02	'58	28.94	28.4	'48	'48	17.13	-36.1	2.51	1.05	28.94	37.15	28.4		
Kresge (S.S.) Co.	2.607	1.786	31.28	18.18	8.83	'45	20.65	40.8	'48	'48	46.88	-22.5	2.50	1.60	26.33	28.50	8.2		
Kresge (S.R.)	3.564	2.636	43.47	22.69	8.13	'45	25.36	60.4	'46	'46	72.18	-29.2	2.03	2.00	26.33	34.31	27.4		
Kroger Co.	0.970	0.499	10.25	19.27	-0.87	'58	18.20	44.1	'49	'49	10.89	-26.2	1.76	0.73	18.20	26.22	44.1		
Lehigh Ptrl. Cement	1.411	0.579	16.05	29.09	-7.05	'57	23.70	49.9	'42	'42	9.09	-44.5	2.11	1.00	27.89	34.39	23.3		
Libbey-Owens-Ford	1.572	1.048	20.32	32.74	-0.69	'45	8.51	73.6	'49	'49	26.97	-51.3	2.05	1.80	31.71	42.23	33.2		

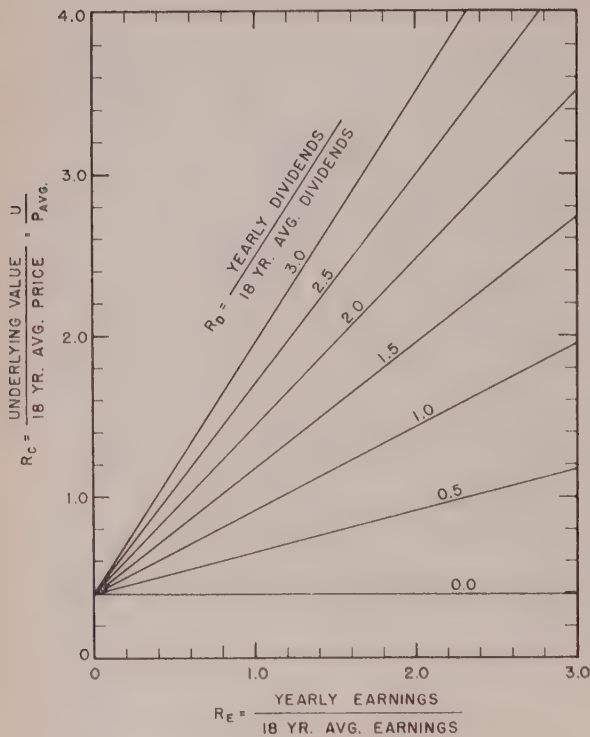
Table I (Cont'd.)

CALCULATED UNDERLYING VALUES OF 122 COMMON STOCKS

Stock	18-Year Averages (1941-58) (\$/Share)				Maximum Deviations				1958 Data (\$/Share)			
	Earnings (R Avg)	Dividends (D Avg)	Price (P Avg)	Standard Deviation (%)	Algebraic Avg. Deviation (%)	Positive Value (V)	Price Deviation (%)	Year	Calculated Value (V)	Price Deviation (%)	Earnings (E)	Dividends (D)
Link-Belt Co.	3.979	2.150	36.61	26.54	4.17	34.44	64.5	'58	34.44	-44.7	3.52	2.55
Lone Star Cement	1.979	0.674	13.85	20.89	-6.92	23.56	29.7	'41	27.49	-33.6	2.06	1.20
McGraw-Hill	2.466	1.498	26.33	16.94	2.43	16.06	26.3	'42	35.04	-28.3	3.02	2.20
McGraw-Edison	1.573	0.818	15.77	30.28	-5.56	22.65	60.1	'49	22.65	-44.8	1.84	1.40
Merck & Co.	1.813	1.526	23.46	21.78	8.33	13.89	45.9	'48	30.23	-24.9	1.80	1.55
Mesa Machine	1.106	0.614	18.40	26.03	-11.75	18.09	55.5	'42	8.17	-43.7	2.64	1.45
Minnesota-Mineplex	4.130	2.931	41.54	33.27	11.89	28.01	85.7	'49	49.91	-29.1	3.69	3.50
Minnesota M. & M.	1.664	0.922	30.90	33.64	-20.46	37.54	33.5	'41	14.31	-63.7	1.73	1.75
Montgomery Ward	1.082	0.458	24.62	42.65	-32.63	23.56	-0.8	'42	10.23	-76.1	2.58	1.20
Murphy (G.C.) Co.	3.031	1.583	30.44	30.49	11.60	18.81	71.9	'50	48.99	-39.4	2.08	2.00
National Biscuit	3.336	1.759	36.68	19.82	3.40	35.36	50.7	'42	19.13	-25.4	3.50	2.13
National Lead	2.111	1.146	22.97	19.43	-3.18	25.62	22.4	'41	11.02	-35.3	3.27	1.80
Nat'l. Dairy Products	1.937	1.321	33.77	39.43	-33.11	58.94	3.9	'42	13.58	-68.2	3.65	3.25
National Steel	4.460	2.134	28.14	32.61	-0.60	45.32	31.2	'50	61.88	-34.0	4.80	3.00
Oasis Elevator	2.045	1.163	21.74	22.29	-2.85	17.20	118.2	'48	24.17	-31.2	0.70	1.50
Owens-Ill. Glass	2.080	1.709	40.59	17.89	5.58	45.94	45.3	'48	25.72	-38.5	4.12	2.10
Parke-Davis & Co.	0.925	0.565	13.34	18.66	7.69	8.29	31.2	'57	29.44	-24.4	1.89	1.05
Park & Ford, Ltd.	1.772	1.190	19.07	23.52	8.56	10.77	57.1	'47	24.44	-26.0	3.44	2.00
Penney (J.C.) Co.	4.283	2.917	60.33	16.11	2.17	60.25	26.1	'42	33.00	-29.7	5.69	4.25
Pennsalt Chemicals	2.708	1.733	45.99	21.90	9.12	40.80	43.0	'50	63.71	-24.0	2.86	1.85
Pet Milk	2.273	0.692	18.65	23.93	6.98	19.96	47.6	'49	20.59	-42.8	3.34	1.00
Phelps-Dodge	3.643	2.269	30.45	23.54	-1.65	33.58	49.6	'56	95.61	-32.5	3.75	3.00
Phillips Petroleum	1.981	0.874	23.72	16.58	-2.66	36.85	33.0	'48	23.26	-30.1	2.45	1.70
Pillsbury Co.	1.961	0.933	16.17	20.67	8.40	19.11	37.6	'47	25.02	-33.5	2.80	1.25
Pgh. & L.E.	8.378	5.194	68.13	31.38	12.67	40.38	77.4	'53	97.15	-30.5	8.90	3.50
Pgh. Plate Glass	3.328	1.758	44.17	26.37	2.29	45.45	62.6	'50	58.78	-39.8	3.24	2.20
Quaker Oats	2.111	1.219	24.71	19.39	8.67	19.66	41.9	'49	28.41	-21.8	3.22	1.76
Raybestos-Manhattan	4.336	2.567	37.52	32.42	10.09	24.04	74.0	'50	53.97	-42.6	3.01	3.40
Reading Co.	4.859	1.542	24.01	43.54	15.39	10.05	121.5	'42	24.45	-45.3	2.86	2.00
Ruboid	2.534	1.198	21.98	22.37	-3.09	9.67	29.0	'41	11.31	-51.4	2.66	1.10
Safeway Stores	1.245	0.608	11.93	19.98	-0.89	54.11	31.8	'41	5.93	-31.7	2.60	1.20
Scott Paper	1.439	0.739	28.13	21.27	-14.48	55.72	14.8	'42	13.75	-39.7	2.75	2.00
Sears, Roebuck	2.625	1.217	30.90	35.48	-3.62	55.35	33.9	'42	7.89	-44.0	2.21	1.20
Shell Oil	6.702	3.154	72.37	17.36	3.82	49.09	45.0	'51	73.66	-12.6	11.48	5.50
Sherrin-Williams	4.474	2.269	33.10	39.44	-10.75	45.18	114.2	'50	50.02	-40.5	4.07	2.50
Stumma Co.	2.950	1.212	24.40	23.40	-10.35	32.64	50.9	'42	10.71	-47.1	3.24	2.00
Suomy Mobil Oil	1.025	0.549	9.86	29.92	-7.78	14.02	71.8	'50	10.03	-40.1	1.11	1.00
Square D Co.	2.893	1.692	30.76	21.26	7.15	25.59	44.6	'50	28.60	-21.3	4.26	2.35
Standard Brands	1.633	1.081	21.24	15.70	6.85	19.72	30.3	'50	21.70	-15.4	2.42	1.50
Sterling Drug	2.220	1.191	17.29	30.26	1.54	9.91	75.9	'42	8.36	-35.6	3.19	1.96
Stewart-Warner	2.664	0.508	34.89	17.49	-5.31	49.32	26.2	'41	17.81	-31.0	2.73	0.97
Sun Oil Co.	2.925	1.595	48.85	30.65	-6.88	55.94	37.1	'41	20.32	-61.0	6.89	4.00
Sunshine Biscuits	3.264	1.256	34.43	32.02	12.90	19.52	71.5	'49	40.78	-26.8	1.55	1.50
Swift & Co.	2.873	2.077	27.07	17.85	-11.39	59.42	19.7	'49	19.72	-31.7	5.31	2.35
Takken Roller Bearing	2.339	1.490	26.44	40.66	13.86	14.82	91.8	'49	32.41	-41.1	2.10	2.00
Union Carbide	3.037	2.028	56.41	18.24	-2.97	54.20	34.1	'50	73.50	-36.8	4.15	3.60
Union Oil of Calif.	3.033	1.399	27.98	26.51	1.18	24.58	78.0	'48	41.31	-43.6	3.06	1.29
Union Tank Car	1.858	1.274	19.45	20.44	6.29	22.46	41.4	'53	20.32	-28.9	2.16	1.60
United Biscuit	1.858	1.251	23.32	39.58	5.06	15.68	106.2	'42	11.15	-40.1	1.83	1.50
United Steel Corp.	1.444	0.982	24.62	16.83	-12.29	36.55	23.4	'50	28.92	-39.4	3.13	3.00
Vick Chemical Co.	2.968	2.451	22.51	17.06	3.92	31.20	53.8	'50	21.69	-20.4	5.01	1.60
Victor Chemical Wks.	1.463	0.968	22.51	43.77	4.75	20.72	34.2	'50	29.41	-20.8	1.92	1.40
West. Va. Pulp & Paper	2.007	0.909	18.88	31.15	-13.22	21.83	69.6	'44	8.06	-56.9	1.78	1.50
Western Auto Supply	1.515	0.762	11.73	31.31	6.86	45.61	82.9	'50	18.26	-40.1	2.24	1.05
Westinghouse Air Brake	2.223	1.512	22.98	33.31	11.98	44.73	94.6	'48	40.73	-31.9	2.10	1.20
Westinghouse Elec.	3.298	1.568	38.16	38.27	7.92	33.96	101.4	'50	56.24	-40.9	4.25	2.00
Woolworth (F.W.)	3.271	2.250	43.44	20.44	9.63	45.29	57.9	'41	33.67	-12.9	3.34	2.50
Yale & Towne Mfg.	1.635	0.758	16.19	35.59	7.71	8.48	115.8	'52	19.39	-26.1	1.62	1.50
Over-all for 122 Stocks				27.03	-0.34		121.5			-78.5		

Figure I

Recommended Correlation



the entire 122 stocks were only 20% different from those for the first 10 stocks correlated.

Yearly Averages Employed

The stock prices employed were the yearly averages of the monthly highs and lows. These yearly averages were then combined into 18-year averages and used to obtain values of (R_P), the ratio of each yearly average

price to the 18-year average price for each stock. These were then correlated by the method of Least Squares against the corresponding ratios for earnings (R_E) and dividends (R_D) for some 2,189 sets of data from the 122 stocks. To differentiate the observed price ratios (R_P) from those calculated by means of the correlation, the latter have been designated as R_C .

Pertinent data on the various stocks are given in Table I together with Statistical data on the standard deviation, algebraic average deviation, and maximum positive and negative deviations for each stock. The correlation Equations (a) and (b) were used to calculate the underlying value for each stock for each year of its history during the period studied. The deviations are the difference between the calculated underlying value for a given year and the actual average price for that year. The over-all standard deviation for the 2,189 sets of data checked against the correlation is $\pm 27.03\%$. On first thought this standard deviation might seem rather large, but further reflection brings out (1) that the correlation precision is quite good, considering the type of data being correlated, and (2) that these very deviations provide the basis for a profitable investment policy.

In any given year, the day-to-day stock prices vary considerably, so that the price range between the high for the year and the low for the year is often quite large. This difference may run as high as $\pm 50\%$ from the mean price. In fact, for the stocks of Table I, the variation from the mean prices for 1958 averaged $\pm 20.5\%$. This might be considered a measure of the "experimental error" of the data being correlated. These variations reflect psychological factors, too numerous to mention and too ill-defined to evaluate, let alone predict, which have little or no bearing on the underlying value of a stock.

Over long periods, stock prices do reflect underlying values, but at any given time the market may be reflecting what has happened some time ago, what will

Table II
CORRELATION EQUATIONS

		Deviations* (% of Calculated Value)			
		Standard	Algebraic Average	Maximum	
				Positive	Negative
(1)	$R_{C1} = 0.0588 + 0.9417 R_E$	± 46.30	3.05	989.8	- 74.5
(2)	$R_{C2} = -0.1553 + 1.1556 R_D$	49.15	5.62	645.9	-935.6
(3)	$R_{C3} = -0.1646 + 0.1555 R_E + 1.0094 R_D$	46.09	5.88	842.3	-637.1
(a) (4)	$R_{C4} = 0.3946 + 0.5205 R_E R_D$	27.03	-0.34	121.5	- 78.5
(5)	$R_{C5} = 0.5424 - 0.3161 R_E + 0.6651 R_E R_D$	26.28	-1.07	105.2	- 81.6
(6)	$R_{C6} = 0.1102 + 0.5509 R_D + 0.2915 R_E R_D$	26.97	1.43	184.9	- 68.9
(7)	$R_{C7} = 0.2540 - 0.2873 R_E + 0.5325 R_D + 0.4306 R_E R_D$	25.87	0.33	132.8	- 74.8
Calculated Underlying Value of Stock, (U) = (R _C) (P _{avg})					
R _C = "Calculated" Ratio: (Yearly Average Price)/(18-Year** Average Price)					
R _E = Ratio: (Yearly Earnings)/(18-Year** Average Earnings)					
R _D = Ratio: (Yearly Dividends)/(18-Year** Average Dividends)					
P _{avg} = 18-Year Average Price, \$/Share					

Calculated Underlying Value of Stock, (U) = (R_C) (P_{avg})

R_C = "Calculated" Ratio: (Yearly Average Price)/(18-Year** Average Price)

R_E = Ratio: (Yearly Earnings)/(18-Year** Average Earnings)

R_D = Ratio: (Yearly Dividends)/(18-Year** Average Dividends)

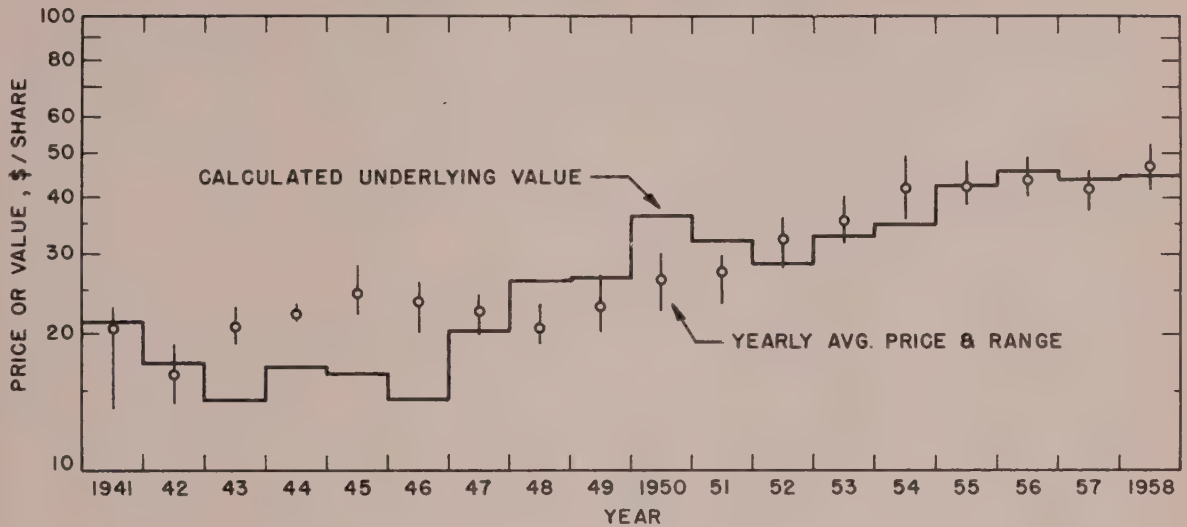
P_{avg} = 18-Year Average Price, \$/Share

*Sets of Data Correlated: 2,189

**1941 Through 1958

Figure II

Typical Price-Value Comparison
(American Can Company — Common Stock)



happen some time in the future, or what it is hoped or feared may happen. Rarely does it reflect what *is* happening. Thus, price changes usually precede or follow but rarely coincide with changes in earnings and dividends. Since the standard deviations from the correlation are based on comparisons of price and calculated underlying value for the same year, they are necessarily larger than would be the case if this difference in timing did not exist.

In most instances where wide deviations from the correlation are observed, these differences are eliminated within one to three years. A typical example is shown in *Figure II*. It will be noted that prices tend to cycle around the line of underlying value calculated by means of Equations (a) and (b). This divergence of price and value provides opportunities for profitable investment, the correlation representing a trend line of underlying value. It will be noted that the yearly average price was below the calculated underlying value in eight of the 18 years. In five more years the price was below value at some time during the year.

Along with the correlation as defined in Equation (a), Least Squares correlations for six other combinations of the variables were developed and examined. This resulted in the seven equations, shown comparatively in *Table II*, together with the standard deviations, algebraic average deviations, and maximum plus and minus deviations from each. Study of *Table II* indicates that there is a rather wide difference in the precision of the equations, the standard deviations ranging from $\pm 49.15\%$ to $\pm 25.87\%$. The power of the earnings-dividend interaction ($R_E R_D$) is shown by the fact that the standard deviation drops sharply when it is included. It is believed that this development together with the use of ratios in place of absolute values for

prices, earnings, and dividends represents an important advance over the published literature. Basing the correlation on ratios rather than absolute values enables each individual to be his own Financial Analyst, since the generalized form of the equations requires only averaged earnings, dividends, and prices (and even these are provided for 122 stocks in *Table I*). Thus redetermination of the correlation coefficients becomes unnecessary for several years.

As a test of this, an equation similar to Equation (a) with coefficients derived from data on substantially the same stocks but for a 16-year period from 1941 through 1956 was checked against the 1941-1958 data of *Table I* using the 18-year averages as the basis for calculating R_E and R_D . The resulting standard deviation for the 2,189 sets of data was $\pm 26.79\%$, the algebraic average deviation -2.36% , and the maximum $+110.0\%$ and -81.1% . The slightly lower standard deviation in this instance than for Equation (a) which was actually derived from the 1941-1958 data is somewhat surprising on first thought. It is probably due to the fact that the Least Squares procedure used in this particular work was designed to minimize the standard deviation of the price ratios (R_P) from the correlation equations rather than the percent deviation of yearly average prices from underlying values (U), which are given in *Tables I* and *II*.

While the Least Squares procedure could have been set up on the other basis with some additional complication and extension of the work, this slight difference was not considered important. What is perhaps of more practical interest is a comparison of the applicability of the two equations to the data for 1958. Whereas the over-all algebraic average deviation of the 1958 yearly average stock prices from Equation (a) was $+26.34\%$,

the corresponding algebraic average deviation of the 1958 prices from the equation derived from 1941 through 1956 data was +29.42%. Since an equation with coefficients derived from the earlier years' data gave results for 1958 reasonably comparable with those calculated by means of coefficients derived from 1941-1958 data, it would appear that an equation for calculating R_C , once developed, can be used for several years without revision.

It will be noted that the recommended Equation (a) is Equation (4) of Table II. The reasons for its choice over the other equations merit some discussion. All other things being equal, the equation with the lowest standard deviation might be expected to be preferable. Incidentally, it should be mentioned that in its present use it is doubtful that the standard deviation has its customary Statistical meaning with all of the probability connotations. Charts of the type of Figure II indicate that the price data follow a wave motion around the line of calculated underlying value rather than having a random scatter. Thus, the laws of probability normally associated with standard deviation do not apply. Nevertheless, standard deviation does provide an effective index of correlation precision, the correlation having the lowest standard deviation being the best representation of the data. On this basis, Equation (7) of Table II might be preferred over Equation (a).

However, three other properties of the equations must be considered, namely, freedom from negative coefficients and a positive and adequate intercept. Equation (7) is not recommended because of its negative coefficient for R_E . Because of it, R_C and U decrease as earnings increase at all values of R_D below 0.667. This, of course, is anomalous. Equation (5) is ruled out for the same reason. Equations (2) and (3) are eliminated because of their high deviations and their negative intercepts. The negative intercepts cause some of the calculated values of U to be negative and are thus responsible for the large negative deviations.

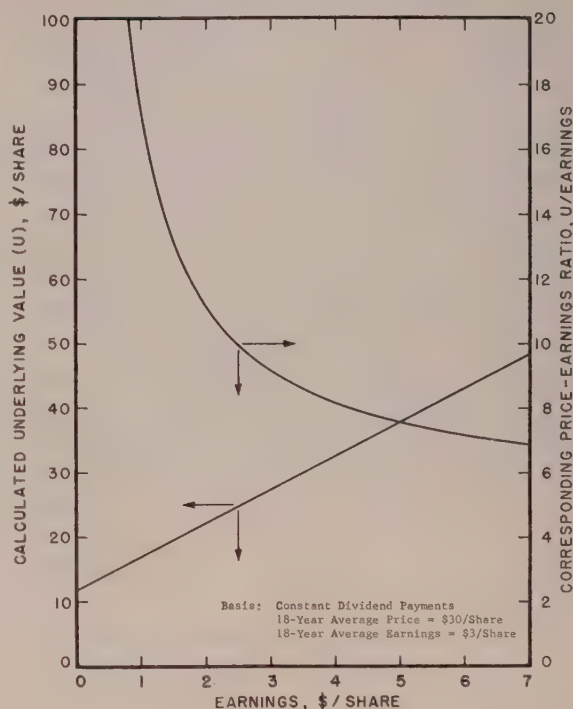
Equation (1) has a positive intercept and coefficient but is ruled out by the large deviations. Admittedly, there is less basis for choice between Equations (4) and (6). The deviations are comparable, but Equation (4) was chosen as the recommended equation not only because of its greater simplicity but chiefly because it was felt that its higher intercept is more realistic. Observation of a large number of stocks indicates that when earnings or dividends fall to zero for a year or two the stock price does not fall to zero but to 30-60% of its historic average value.

Price/Earnings Ratio

Lack of an intercept is one of the weaknesses of the customary price-earnings ratio. It is implicit in the price-earnings ratio that when earnings are zero price is zero. As pointed out above, this is of course untrue. Another weakness is the tendency to think of price-earnings ratio as a constant, when in reality a different ratio should prevail at every value of earnings. It is

Figure III

Effect of Earnings on Value and
Corresponding Price-Earnings Ratio
(Constant Dividend Payments)



frequently stated that the price-earnings ratio for a stock today is no higher than in 1933. However, the cause today is quite different. The high price-earnings ratios during 1933-1935 were due to very low earnings. At zero earnings, the ratio becomes infinite. The high price-earnings ratios of recent years have been due to very high prices which even the prevailing high earnings have not been able to moderate. Thus, price-earnings ratio is a "two-edged sword" influenced unduly by changes in either the numerator or the denominator.

As an illustration of how the price-earnings ratio varies with earnings, Figures III and IV have been prepared based on Equations (a) and (b) and certain assumptions shown on the plots. Figure III illustrates a case where dividends are constant. Very few stocks conform to this, but American Telephone and Telegraph is one stock that paid the same dividend for over 30 years. From Figure II it is evident that price-earnings ratio varies considerably with changing earnings. Figure IV illustrates a case with constant payout ratio; i.e., ratio of dividends to earnings. This too is a simplification although many stocks approximate this condition over fairly long periods. Here again it is seen that the price-earnings ratio varies widely with earnings.

A few words on the practical application of this procedure may be in order. It has been found effective to confine stock purchases to those in which the price is below the calculated underlying value. In recent years

368 Million Dollars of American-Marietta Products Sold During 1960

PAINTS

PRINTING
INKS

DYES

SYNTHETIC
RESINS

ADHESIVES

SEALANTS

METALLURGICAL
PRODUCTS

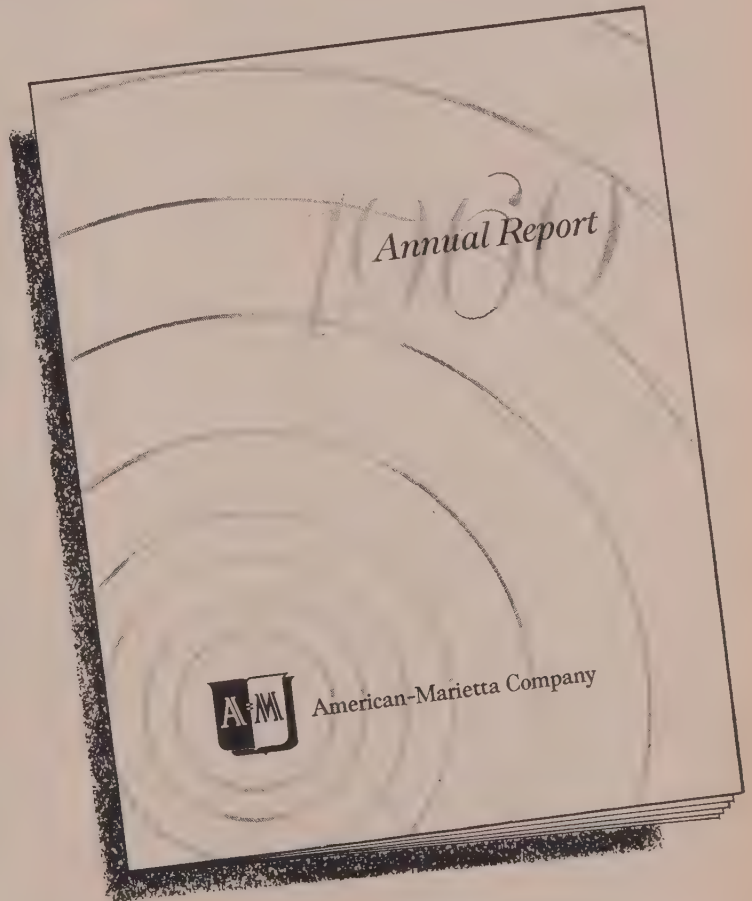
HOUSEHOLD
PRODUCTS

CONSTRUCTION
MATERIALS

LIME

REFRACTORIES

CEMENT



*Mailed to 48,974
A-M Shareowners*

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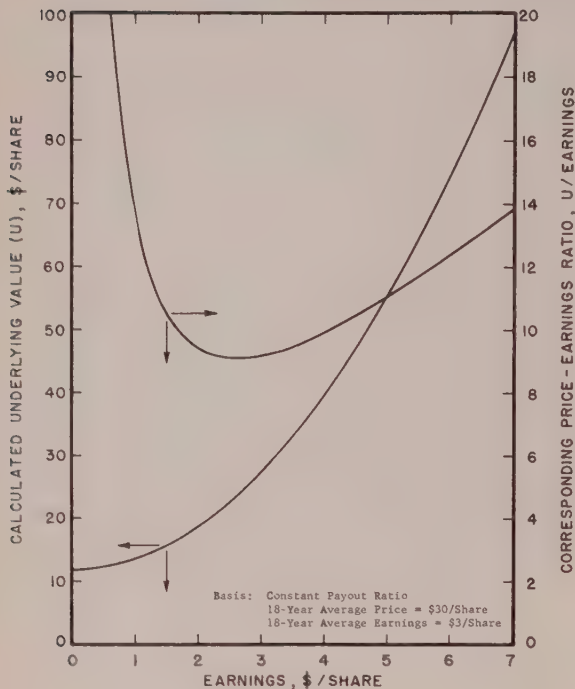


AMERICAN-MARIETTA COMPANY

101 East Ontario Street, Chicago 11, Illinois

Figure IV

Effect of Earnings on Value and
Corresponding Price-Earnings Ratio
(Constant Payout Ratio)



these have not been easy to find, but there have always been a few suitable candidates. As pointed out in the discussion of *Figure II*, even in years when the yearly average price of a stock has been above its calculated underlying value, there has been a number where the price was below value at some time during the year. Since earnings and dividends change relatively infrequently compared to daily stock prices; it is usually possible to use a calculated underlying value for several months without recalculation. When an underpriced stock which also meets the quality requirements of stability and soundness has been found, purchases are made in about four increments, spaced three to six months in time or about 10% in price. This averaging provides further safeguard against making the total commitment at too high a price. The over-all results have been quite satisfactory including not only reasonable appreciation but cash dividends averaging well above 5%.

Since this article has dwelt at some length on what this procedure *is*, it also seems appropriate to emphasize what it *is not*. It is not a method of predicting market movements or the future price of any stock but *rather* a method of checking the current price of a stock against

its own history. It does not contemplate use of forecasted earnings and dividends (which are always uncertain) to predict future prices, but rather the determination of whether a stock is over- or underpriced in relation to its present earnings and dividends. Purchasing underpriced stocks as indicated by this procedure provides a degree of protection against the vicissitudes of the market and enables turning them to profit instead of loss.

In conclusion then, this article has presented an effective statistical yardstick of common stock value which should enable an investor to choose stocks with some regard for underlying value. It is not contended that investment results will always work out in exact accordance with these calculations; but the author is convinced that if stock purchases are confined to those stocks which are priced below their calculated underlying value less depreciation will occur in a falling market than if the reverse policy—or no policy—is followed. Moreover, he has used this procedure for several years as the basis for his own stock purchases—with satisfactory results, not only in the rising market that has generally prevailed but especially in the falling market of 1957.

APPENDIX

Sample Calculation of Underlying Value of Stock

Calculate Value of American Can Co. Stock
Based on 1959 Data

	\$/Share 1959	1941-58
Earnings (1st 9 Months of 1959)	\$ 2.42	
Average 4th Quarter Earnings ('55 Through '58)	0.45	
Estimated '59 Earnings	\$ 2.87	2.117
Dividends	\$ 2.00	1.228
Price	\$45.60	29.60

(1941-'59 Incl.)

$$\text{Average Earnings} = \frac{(18)(2.117) + 2.87}{19} = 2.157$$

$$\text{Average Dividends} = \frac{(18)(1.228) + 2.00}{19} = 1.269$$

$$\text{Average Price} = \frac{(18)(29.60) + 45.60}{19} = 30.44$$

$$R_E = \frac{2.87}{2.157} = 1.331; \quad R_D = \frac{2.00}{1.269} = 1.576$$

$$R_C = 0.3946 + 0.5205 R_E R_D \\ = 0.3946 + (0.5205)(1.331)(1.576) = 1.486$$

$$\text{Calculated Underlying Value (U)} = (1.486)(30.44) \\ U = \$45.23/\text{Share}$$

In this instance, the calculated underlying value is in close agreement with the 1959 Average Price of \$45.60/share indicating that this stock was selling at about its value.



STANDARD OIL COMPANY (Indiana) MAKES MAJOR MOVES FOR LONG-RANGE GROWTH

"Our organizational changes are designed to improve sales and earnings and to accelerate long-term growth. The unification of three separate refining-marketing operations will give us the advantages of efficiency and flexibility under single management of a nation-wide subsidiary. The new structure will permit all of our executives to use their talents more effectively to improve the Company's profitability."

JOHN E. SWEARINGEN, PRESIDENT

Nineteen-sixty Annual Report discloses accomplishments in terms of increased earnings and corporate reorganization

During 1960, Standard Oil Company (Indiana) made several important strides in its long-range program to increase efficiency and earnings. A comprehensive reorganization of product manufacturing, marketing and distributing activities was accomplished. Foreign activities were accelerated. And a new planning department was set up to help lay out long-range programs for the Company and assess investment opportunities in the petroleum business and related fields.

For the year 1960, corporate earnings were about 4 per cent greater than in 1959. Net earnings totaled \$144,762,000 or \$4.05 a share on the average number of shares outstanding, as compared with a net of \$139,597,000 or \$3.90 a share the previous year. Cash flow increased to \$9.62 a share, compared with \$8.70 a share in 1959.

Record Income and Assets. Sales and other operating revenues were up, due mainly to larger sales of major petroleum products, natural gas and automobile supplies. Total income rose \$57 million to a record \$2,038,208,000. Total assets at year end equalled nearly \$3 billion. Capital expenditures were \$251,574,000.

Important Reorganization. On December 31, 1960, the Company completed a major reorganization in which Standard Oil Company (Indiana) became entirely a parent company for domestic and foreign activities. Its functions will be: 1) to provide guidance for policies, planning, and programs of the consolidated enterprise; 2) to oversee and handle the Company's business and financial affairs; 3) to coordinate operations among all subsidiaries; 4) to evaluate performance, organization and personnel.

The direct management of the manufacturing, transportation, research and marketing facilities was turned over to its wholly-owned subsidiary—American Oil Company. American Oil Company, further expanded by the facilities of Utah Oil Refining Company, also wholly-owned, has become a national refining-marketing organization, with all the increased efficiency inherent in unified management. Operations of other Standard Oil Company (Indiana) subsidiaries were not affected by the reorganization.

Dividends Paid. The Company paid four quarterly cash dividends of 35 cents each per share. In addition, a special fourth quarter dividend of one share of Standard Oil Company

(New Jersey) stock was paid for each 65 shares of Standard Oil Company (Indiana) stock, or cash payments were made in lieu of fractional shares of Jersey stock. The total dividend value was \$1.995 and equal to about 50 per cent of earnings, marking the ninth straight year in which this ratio has been maintained.

Production. Net production of crude oil and natural gas liquids in North America averaged 299,283 barrels per day in 1960. After production of 110 million barrels during the year, reserves showed a gain of 103 million barrels, bringing the total reserves in North America to 2,347 million barrels at year end. Net production of natural gas increased 4.5 per cent—from 1.51 billion cubic feet daily to 1.58 billion cubic feet. Net proved reserves of natural gas totaled 15,358 billion cubic feet at year end, an increase of 2,090 billion cubic feet.

In Argentina substantial production of crude oil was achieved amounting to 31,400 barrels a day at year end. In Venezuela the Company shared in the completion of several large wells. A subsidiary was formed in Australia—Amoco Australia Ltd.—which plans to build a refinery near Brisbane with an initial crude capacity of 15,000 barrels a day.

Directory of Standard Oil Company (Indiana) Major Subsidiaries

PAN AMERICAN PETROLEUM CORPORATION, Tulsa, finds and produces crude oil and natural gas in the United States and Canada. Its subsidiary, Pan American International Oil Corporation, New York City, engages in oil exploration and development outside of North America.

AMERICAN OIL COMPANY, headquartered in Chicago, manufactures, transports, and sells petroleum products in the United States. It markets through its Standard Oil division in 15 Midwest states.

SERVICE PIPE LINE COMPANY, Tulsa, transports crude oil for our refineries and for others.

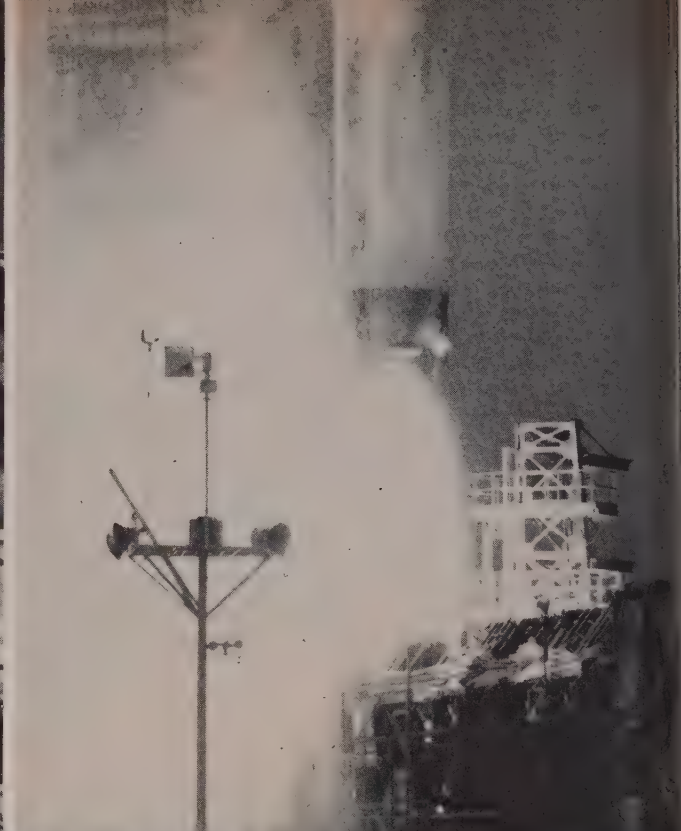
AMOCO CHEMICALS CORPORATION, Chicago, manufactures and markets chemicals from petroleum here and abroad.

INDIANA OIL PURCHASING COMPANY, Tulsa, buys, sells, and trades crude oil and natural gas liquids in the United States.

AMOCO TRADING CORPORATION, New York City, buys, sells, and trades crude oil and products elsewhere in the world.

TULOMA GAS PRODUCTS COMPANY, Tulsa, markets liquefied petroleum gas, natural gasoline, and related products.

For the complete 1960 Annual Report, write Standard Oil Company (Ind.), Dept. W-100.



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OFFICES IN 80 PRINCIPAL CITIES OF THE WORLD

Practical Limits to Bank Expansion

by Leonard W. Ascher

THE PAST TWENTY YEARS have seen a steady expansion of the nation's banks with accompanying economic growth and substantial inflation of prices. Today, bank resources are at an all-time high; loans are at record levels; and bank capital accounts are high and steadily rising. We might therefore assume that banks are in a position to continue the expansion, supplying finance for additional growth and price rise.

A close look at bank balance sheets, however, reveals that further expansion must be moderate lest bank condition deteriorate, with key indicators driven to disturbing levels. This study deals with "all commercial banks," the institutions that supply the bulk of our active "money."

In 1945, banks were comfortably supplied with reserves and loaded with liquid resources which could easily be converted into additional reserves. World War II's end also found consumers eager to buy; business ready to supply burgeoning demand at rewarding profit levels; and labor organized to take its full share of economic benefits. The consequence was an avalanche of spending by business and consumers, in which financing by banks played a fundamental role.

Borrowed funds introduced into the economic stream were recirculated, with prices carried upward in a spending spiral. Moreover, money created by credit expansion took on a faster pace of turnover, contributing to the inflationary rise. Most of these conditions, however, have changed drastically, and we enter the seventh decade of the twentieth century under financial circumstances which dictate restraint, rather than liberal expansion. Banks, particularly, are much tighter than they have been in the past and, while they should be able to supply sufficient credit to maintain economic activity and even to finance growth, they will not be in a position to supply great sums of purchasing power in the form of additional demand deposits.

Failure to appreciate the present banking situation stems in part from preoccupation with banks' reserve position. There is no question that reserve requirements can be a restraint on credit expansion, but commercial banks are not likely to be short in the future because the Federal Reserve can supply additional reserves by

advances to banks and by open market operations. If necessary, the Fed can give member bank reserves added leverage by reducing the percentage required behind deposits. Reserve Bank authorities not only are able, but generally have been willing, to supply reserve needs of member banks as long as inflation is dormant, and recently they authorized vault cash holdings to be counted, thus increasing reserves. Open market operations, too, have been used lately to make Reserve funds available to banks, a measure designed to ease money and credit. Our monetary authorities have permitted commercial bank deposits to grow at a rate of 3.59% per year, and there is no reason to believe that they will change their attitude.

25% in 'Gold Certificates'

Although reserve resources at the member bank level may be adequate, the reserve situation of the Reserve Banks themselves is not easy. Behind the member bank deposit balances that serve as member bank reserves, and behind Federal Reserve Notes, Reserve Banks must keep 25% in "gold certificates." Actually, the bulk of Reserve Bank reserves is not in the form of gold certificates but is a credit balance in a gold account on the books of the United States Treasury.

Each expansion of member bank reserves, therefore, ties up more of the Fed's "gold" resources. Altogether, the reserve requirements of the Federal Reserve Banks come to approximately \$12 billion, out of a total gold stock of \$18 billion. With short-term claims held by foreigners in excess of \$18 billion, and with gold exports approaching \$2 billion per year, serious concern exists over the gold situation.

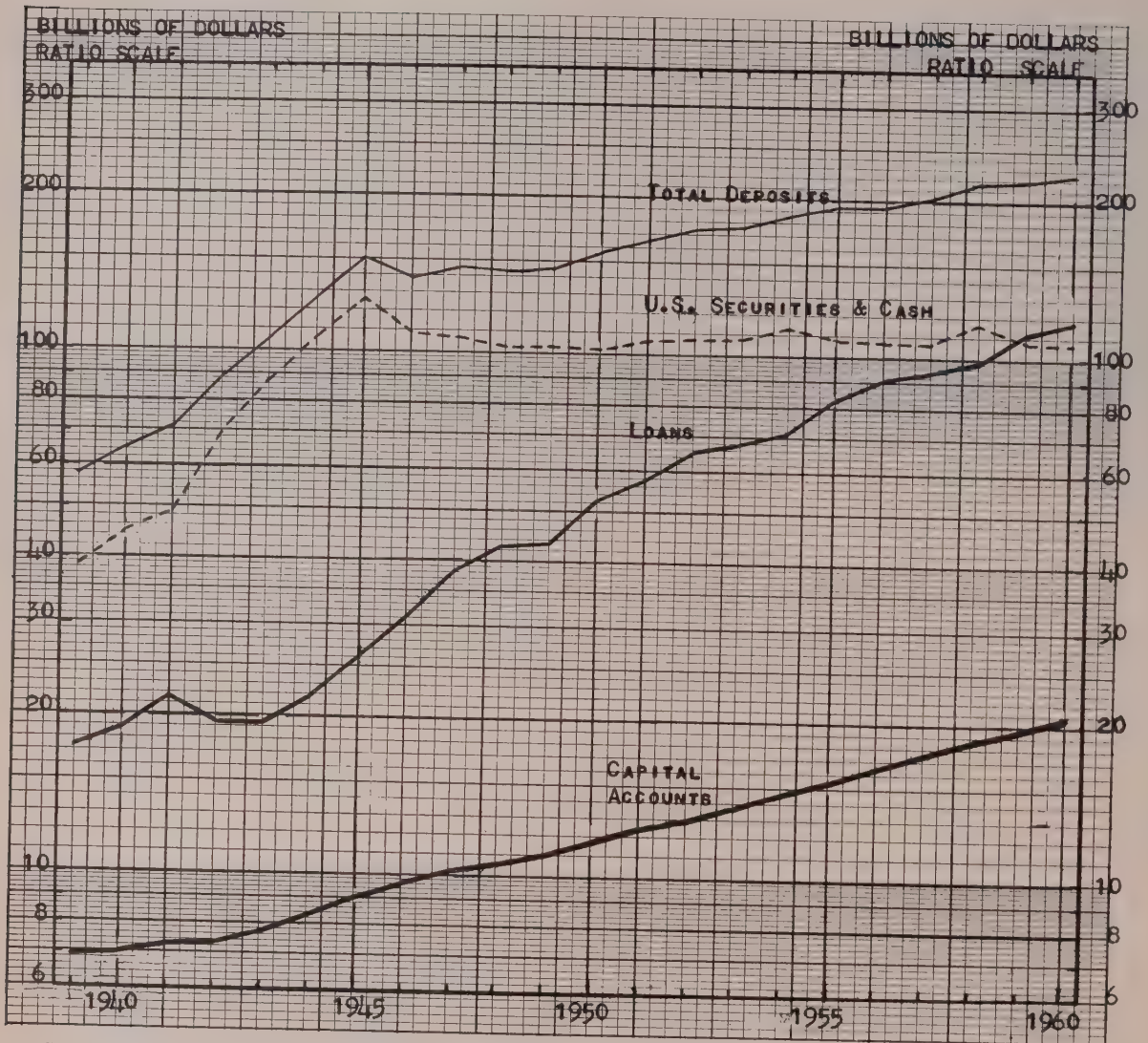
The significant fact is, however, that despite the stringency in gold the Reserve Banks have not embarked upon a restrictive monetary policy to protect their position, and probably will not embark upon such a policy as long as the economy is operating at less than capacity. Growing shortage of gold will have to be dealt with, but there are many other measures, outside the scope of this analysis, which will be taken before commercial bank reserves are tightened.

While the role of bank reserves is well-understood and changes in reserves are carefully watched, there are other elements in the bank situation that are followed by bankers, regulatory authorities and specialists, and which do not make the front pages—or even the financial pages—of newspapers. Four of these indexes of bank condition are shown in *Chart 1*.

In the years following World War II, banks have

Dr. Leonard W. Ascher is professor of economics and business at San Francisco State College. He took his A.B. and Ph.D. from the University of California, at Berkeley. During World War II he served with the War Production Board and the Foreign Economic Administration. His book, "Survey of Accounting" was published by Harper & Brothers in 1952.

SELECTED RESOURCES AND LIABILITIES
All Commercial Banks



Source: Board of Governors of the Federal Reserve.

been building up their capital resources at an annual rate of 5.66%. This is perhaps the most significant development in bank condition because bank capital is a major factor in bank safety. The usual index of capital adequacy is the capital ratio—total capital account balances (including common stock, surplus, and undivided profits) as per cent of total assets. The logic runs as follows: Banks are corporations heavily in debt to the public. They have resources to cover their debt. These resources could suffer loss in value. Such loss falls first on bank capital and, if capital is adequate, it will absorb the loss. Thus, a bank with capital ratio of

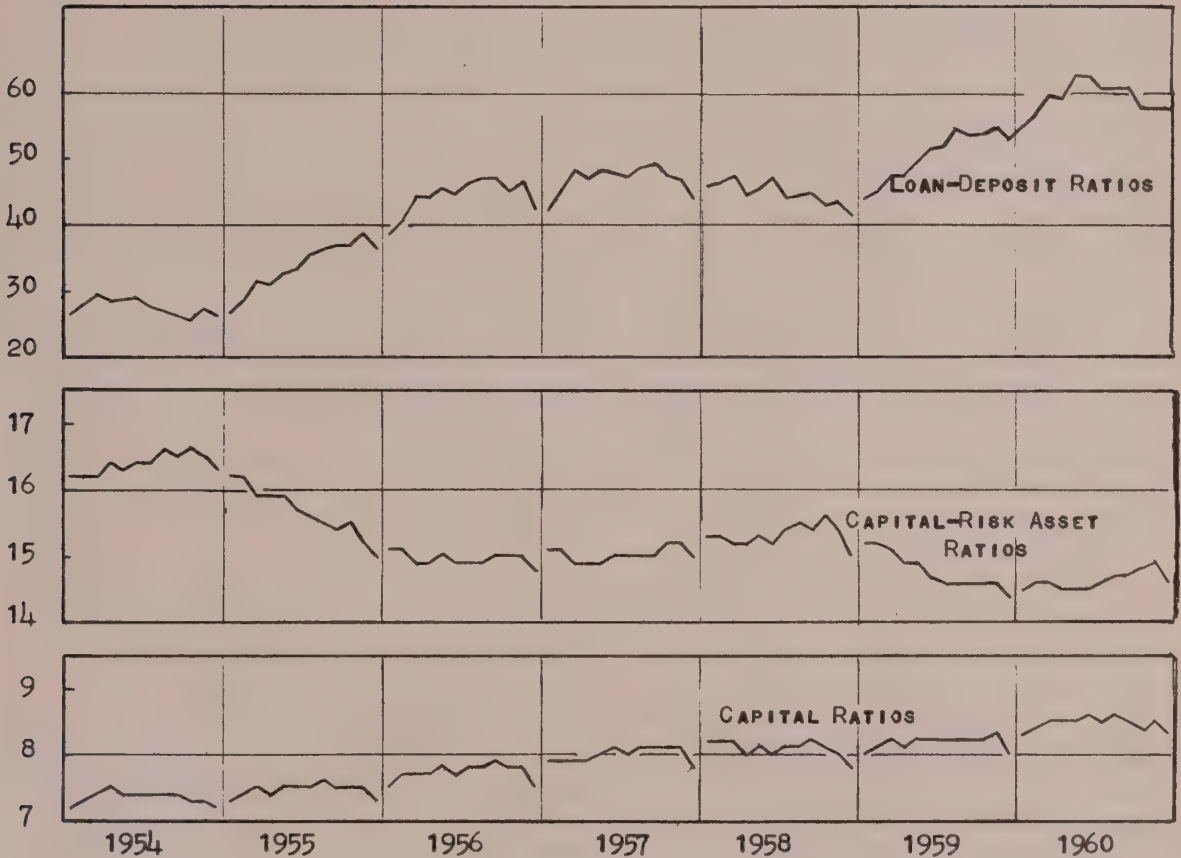
10% could see its assets fall almost one-tenth in value without loss to depositors. Another bank with only 5% capital could be destroyed by relatively small loss on its assets.

Bank managers, bank examiners, and banking authorities are sensitive to this problem. The Federal Reserve Banks publish annually and circulate among member banks reports on ratios, including capital ratios, and bankers eagerly anticipate these reports to see how their banks compare. In 1945, with capital accounts at \$8,950 million and total assets at \$160.3 billion, the capital ratio was 5.9%, an average figure that glosses

Chart 2

CAPITAL- AND LOAN-DEPOSIT RATIOS
All Commercial Banks

PERCENT



Source: Board of Governors of the Federal Reserve.

over the fact that banks with capital ratios above the average are offset by banks with ratios below, and 5.9% is a low level which no bank can report with complacency. Banks have responded by building up their capital accounts at a rate approaching one billion dollars a year. (In 1960 the addition was approximately \$1.55 billion, an increase for the one year of 7.9%, lifting average capital ratios for commercial banks to 8.3%—see Chart 2).

Bank statistics are not all that an Analyst might desire. Only since 1954 have the data reported been adequate for the calculation of capital ratios, capital-risk asset ratios, and deposit loan ratios (as in Chart 2). Failure of the *Federal Reserve Bulletin* prior to 1954 to disclose balance sheet totals, and U. S. Government deposits particularly detracts from usefulness of the statistics. The comprehensive *All-Bank Statistics, 1896-1955*, Board of Governors of the Federal Reserve System, 1959, is disappointing because "all commercial banks" are only those covered by agreement between

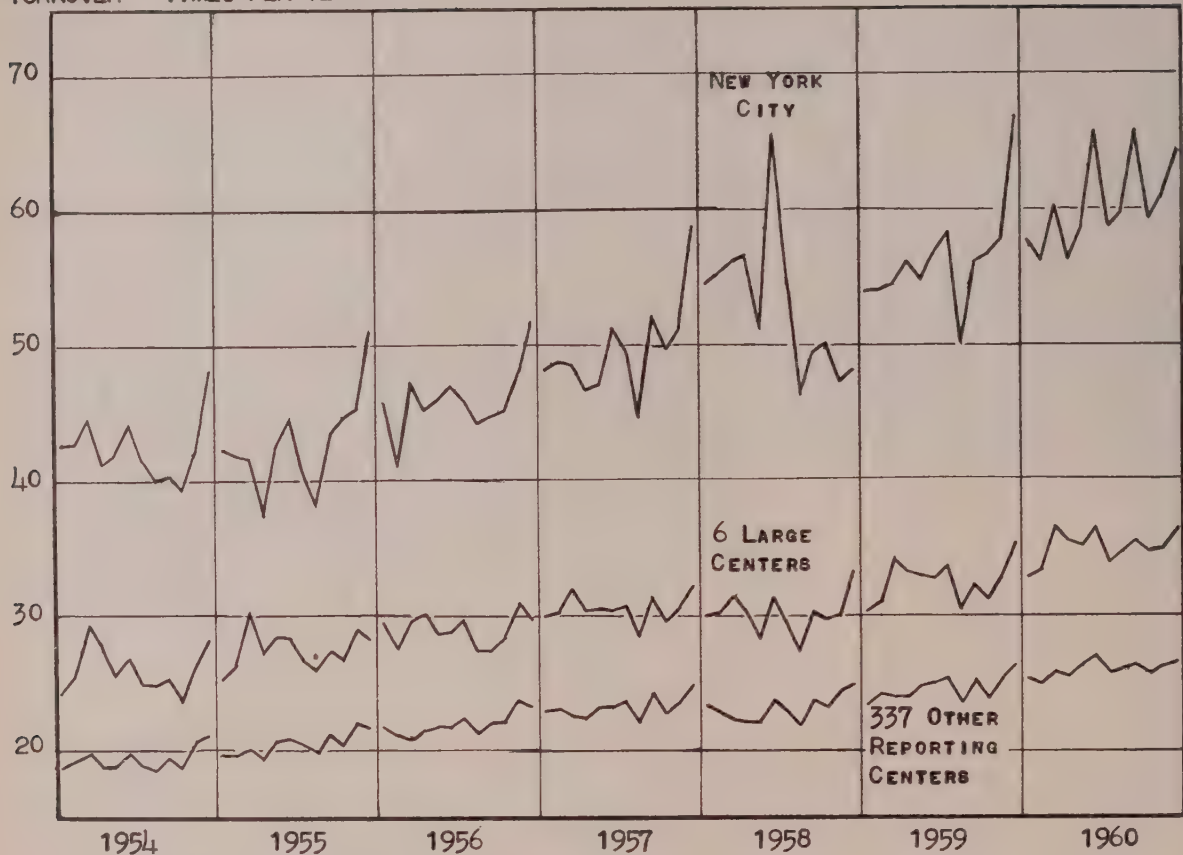
the Federal Reserve, the F.D.I.C., and the Comptroller of the Currency, with the result that reported magnitudes are not comparable with "all commercial banks" as covered in the *Bulletin*, and one has to rely on the *Bulletin* for statistics since 1955.

Those banks that have not accumulated sufficient capital have been disciplined by the banking authorities, and one non-conformist bank is in process of expulsion from the Federal Reserve system. (See the *Federal Reserve Bulletin*, July, 1960, pp. 850 ff. for an account of the proceedings of the Federal Reserve against the bank).

Banks will continue to accumulate capital by retaining earnings, and by selling additional shares to stockholders under offers of rights. Many banks paid stock dividends in 1959 to make up for earnings not distributed as dividends. Capital ratios can be maintained and may be further improved as long as credit is expanded modestly in line with economic growth, but liberal expansion of deposits through loans would lead to an

TURNOVER OF DEMAND DEPOSITS
Without Seasonal Adjustment

TURNOVER - TIMES PER YEAR



Source: Board of Governors of the Federal Reserve.

awkward capital situation which banks will try to avoid. From the capital point of view, therefore, the credit situation is anything but inflationary in outlook.

Bankers often point to liquid resources as a sign of banking strength. When capital ratios were low in the 1940's, bankers asserted that risks also were low because of their large holdings of cash and U. S. securities (Chart 1) which left a low volume of risk assets. Assets other than cash and U. S. securities, *i.e.*, total assets minus combined cash and U. S. securities, equal risk assets.

Following 1945, however, cash and U. S. securities holdings have shown little change while total resources of banks have increased enormously, with risk assets (particularly loans) accounting for the bulk of the increase. Bank capital has also increased, but not as rapidly as risk assets, so the ratio of capital to risk assets has steadily declined. In 1945 this ratio stood above 25%, but the percentage has fallen below 15% in recent times (Chart 2).

Bankers and supervisory authorities are cognizant of this situation so that continuing levels below 15% may bring objections.

At present, capital-risk assets ratio is the most vulnerable spot in commercial banking, a condition that should inhibit generous lending policies. The situation may not yet be dangerous, but it is hardly one to encourage liberality.

Banks, bank examiners, and banking authorities also watch loan-deposit ratios* as indicators of bank condition, and lately have seen these ratios rise to new high ground. The highest loan-deposit ratios are found in the

*The loan-deposit ratio used here is not a simple comparison of total loans to total deposits. Instead, adjusted deposits of commercial banks are used as the basis, that is, total deposits less interbank and U. S. Government deposits. Total loans are expressed as a percentage of adjusted deposits. Statistics of deposits prior to 1951 fail to report U. S. Government deposits separately so that, except for a few years where complete data are available, loan-deposit ratios cannot be calculated on the adjusted basis.

New York City banks which make large loans to big business. Examination of their combined balance sheets, as reported in the *Federal Reserve Bulletin*, discloses the following changes in condition:

**New York City Member Bank
Capital and Loan-Deposit Ratios**

	Dec. 31, 1945	Dec. 31, 1957	Dec. 31, 1959	Dec. 28, 1960
Capital ratio	6.4%	9.1%	9.5%	9.2%
Capital-risk asset ratio	23.6	16.2	15.7	15.7
Loan-deposit ratio	39.5	70.3	76.0	76.6

Lifting of loan-deposit ratios above 76% should not be easy because banks must keep heavy reserve balances (cash assets) and should maintain substantial secondary reserves as well (U. S. security holdings). Items in transit, moreover, tie up substantial amounts of resources. Part of the reluctance of New York banks to cut their prime rate can be explained by the effect further lending would have on their loan-deposit and capital-risk asset ratios.

Loan-deposit ratios for all commercial banks in the United States averaged only 27.2% in 1947; rose to a peak of 61.3% in mid-1960 (see *Chart 2*) and have since declined—in excess of seasonal—below 59%. To achieve this increase from 27.2 to 61.3%, loans have grown at an annual rate of 10.26% in the 13 years, 1946-1959, while deposits have increased by 3.59% annually in the same interval. A continuation of these rates would carry loans to \$199 billion by 1965; deposits to \$272 billion; and the loan-deposit ratio to 73%. Proceeding on to 1970 and as absurdity, loans would be \$324.6 billion; deposits \$324.2 billion; and the loan-deposit ratio above 100% (highly improbable but not impossible).

The result of such projections suggests that the rates of growth will change before long—latest available data for 1960 indicates decreasing rates—with increase in loans losing pace, increase in deposits slowing up, but with no clear indication whether loan-deposit ratios will move up, down, or sideways. In any event, a change toward slower expansion seems to be indicated.

The post-war era has also seen a steady rise in the rate of turnover in bank deposits, indicating that each dollar of deposit balances finances a larger volume of business transactions. Data for turnover, as shown in *Chart 3*, reveal that the rate reached its peak in the summer of 1960. There may be no theoretical upper limit to turnover, but the higher the figure, the more difficult it should be to maintain the pace.

Although relationships among assets, deposits and capital accounts of commercial banks are such that bullishness in bank credit would bring ratios that would make uncomfortable reading for bankers, there is still one open path to credit expansion. That is investment in U. S. Government securities, a development that may be fostered by Federal spending programs to counter depression.

The new administration in Washington probably will

accept more easily proposals to cut taxes with rising unemployment, in contrast to the preceding administration which emphasized anti-inflationary policies. Tax cutting would bring a Federal deficit to be financed by new issues of government bills, notes and bonds, and the banks not only will be logical markets for such securities, but will supply additional funds in the form of U. S. Government deposit balances. These credits will then be put into circulation by government spending, tending to increase deposits in the hands of the public and total deposits as well.

What seems likely, therefore, is monetization of additional national debt. Such a step, however, will arouse strong criticism, and can be justified only as an anti-depression measure. Inflation is not probable in an environment of depression, nor is substantial expansion of commercial loans likely to occur. Even if government spending does prime the pump, banks will still be tight, with low capital-risk asset ratios and elevated loan-deposit ratios.

Whatever may transpire, however, three facts are certain. The changes will take their departures from the present tight situation of the banks; these changes are unlikely to ease the position of banks; and further developments can be understood only by watching changing ratios of bank condition as well as changing reserve requirements.

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This article presents a simplified approach to the analysis of growth stocks and a Nomograph which eliminates the need for complicated calculations.

A Nomograph for Valuing Growth Stocks

by Robert Ferguson

IT IS WELL KNOWN that a high rate of growth commands a premium price/earnings ratio. No matter how large a premium is paid, a rate of growth in excess of another will eventually pay off if continued long enough. However, if the excess is small, or the premium large, it may be a great many years before this occurs. Unless the more rapid rate of growth is maintained long enough, there will be no pay-off.

The facts in the preceding paragraph raise two important questions:

(1). Given a rate of per share earnings growth in excess of that of some standard, what length of time is discounted by a specified premium?

(2). What maximum price/earnings ratio should be paid for a given rate of growth which will exceed that of some standard for a given length of time?

The choice of a standard is arbitrary. Depending upon what sort of company is being analyzed, one might use such standards as the Dow-Jones Utilities Average, Standard and Poor's 500 stocks, another company, or, perhaps, a national business index.

In order to illustrate the reasoning used in answering these questions, let's examine two companies, A and B, where the rate of growth of A is 51½% per year, and the rate of growth of B is 5% per year (these rates are chosen in order to simplify the calculations and explanation).

If both companies earn one dollar in 1960, their earnings will increase approximately as shown in Table 1.

Table 1

	1960	1961	1962	1963	1964	1965
Company A	\$1.00	\$1.52	\$2.30	\$3.48	\$5.27	\$7.98
Company B	1.00	1.05	1.10	1.16	1.22	1.28

If, at the end of 1960, A's stock sells at 45 times earnings and B's stock sells at 15 times earnings, A sells at 45 and B sells at 15.

If, at the end of 1961, A's rate of growth and price/earnings ratio decline to those of B, then the percentage

change in market price of A's stock, at the end of this period, will be:

$$100 \times \frac{\text{price at end of 1961} - \text{price at end of 1960}}{\text{price at end of 1960}} \\ = 100 \times \frac{1.52(15) - 45}{45} \\ = \text{minus } 50\%$$

This compares with a percentage appreciation of 5% in the stock of B during this same period (it being assumed that B's rate of growth and price/earnings ratio remain constant). If, instead, we assume that A's growth rate and price/earnings ratio decline to those of B at the end of 1962, we find that the percentage change in market price of A's stock, at the end of this period, will be:

$$100 \times \frac{\text{price at end of 1962} - \text{price at end of 1960}}{\text{price at end of 1960}} \\ = 100 \times \frac{2.3(15) - 45}{45} \\ = \text{minus } 24\%$$

This compares with a percentage appreciation of 10% in the price of B's stock. Now, if we assume that A's growth rate and price/earnings ratio do not decline to those of B until the end of 1963, we find, similarly, that the percentage appreciation in A's stock will be 16% compared with 16% for the stock of B.

Performing this calculation for the rest of the years listed in Table 1, and arranging the results in tabular form, we arrive at Table 2.

Table 2

	1961	1962	1963	1964	1965
Percentage appreciation of A					
—50%	—24%	16%	76%	166%	
Percentage appreciation of B					
5	10	16	22	28	

Summarizing, we have found that, if:

(1). A continues to grow 51½% per year for three years, and then drops to a 5% rate of growth,

(2). A's price/earnings ratio drops to 15 when its growth rate drops to 5%,

(3). B's rate of growth and price/earnings ratio remain constant during this time;

Robert Ferguson, a member of the research department of Model, Roland & Stone, was originally trained as a physicist. After receiving his bachelor's degree from Columbia College, he completed a year of graduate physics at Cornell University, on a General Electric Fellowship.

Then, at the end of this three year period, an investment in A will show the same percentage appreciation as an investment in B. In other words, the investment in A will show a gain of only 5% per year compounded. We see, also, that if A's rate of growth and price/earnings ratio decline to those of B before three years have passed, an investment in A will have grown at the equivalent of less than 5% per year. Correspondingly, we note that if A's rate of growth and price/earnings ratio decline to those of B after a longer period than three years, an investment in A will have grown at the equivalent of more than 5% per year.

In the example just described, three years is defined as the discount time of A, relative to B. We say that A's present price/earnings ratio, 45, discounts three years of future growth, at 51½% per year, relative to B.

MAXIMUM PRICE/EARNINGS RATIOS

Suppose we feel that A will grow at 51½% per year for only two years. In order to insure that our hypothetical investment will grow at least as fast as an investment in B, we will want to know what price/earnings ratio discounts 2 years of future growth at 51½% per year, relative to B. In theory, this price/earnings ratio can be found by trial and error, using various initial price/earnings ratios for A in constructing tables of the type found in Table 2 until one is found which discounts two years of growth, relative to B. This price/earnings ratio is defined as the maximum price/earnings ratio, relative to B, which should be paid for a rate of growth of 51½% per year which will continue for two years.

In the case just mentioned, the maximum price/earnings ratio is about 31. To show this is so, we assume first that, at the end of 1960, A's stock sells at 31 times earnings and B's stock sells at 15 times earnings. At this time, A sells at 31 and B sells at 15. If, at the end of 1961, A's rate of growth and price/earnings ratio decline to those of B, the percentage change in market price of A's stock will be:

$$\begin{aligned} & 100 \times \frac{\text{price at end of 1961} - \text{price at end of 1960}}{\text{price at end of 1960}} \\ &= 100 \times \frac{(1.52)(15) - 31}{31} \\ &= \text{minus 26\%} \end{aligned}$$

This compares with a percentage appreciation of 5% in the stock of B during this period. Alternatively, if A's growth rate and price/earnings ratio decline to those of B at the end of 1962, we find that the percentage appreciation in market price of A's stock will be:

$$\begin{aligned} & 100 \times \frac{\text{price at end of 1962} - \text{price at end of 1960}}{\text{price at end of 1960}} \\ &= 100 \times \frac{(2.3)(15) - 31}{31} \\ &= 11\% \end{aligned}$$

This compares with a percentage appreciation of 10% in the stock of B over this same period.

Performing this calculation for the rest of the years listed in Table 1, and arranging the results in tabular form, we arrive at Table 3.

Table 3

	1961	1962	1963	1964	1965
Percentage appreciation of A	-26%	11%	68%	155%	286%
Percentage appreciation of B	5	10	16	22	28

Table 3 shows that a price/earnings ratio of 31 discounts 2 years of future growth at 51½% per year, relative to B. Therefore, 31 is the maximum price/earnings ratio which should be paid, relative to B, for a rate of growth of 51½% per year continuing for 2 years.

GROWTH STOCK NOMOGRAPH

The accompanying Growth Stock Nomograph is designed to permit rapid determination of discount times and maximum price/earnings ratios, without detailed algebraic operations of the type performed above. Directions for its use follow, in the form of an example. And for this purpose, we assume the following.

	1960 Earnings	Mkt. Price	P/E Ratio	Growth Rate
Standard & Poor's 500 Stocks (SPI)				
	\$3.60	54	15	5%
Minnesota Mining & Manufacturing (MMM)				
	1.40	70	50	15

1. Given a rate of per-share earnings growth in excess of that of some standard, what length of time is discounted by a specified price/earnings ratio?

(a). Locate the columns marked "standard growth rates." Choose the one with a growth rate equal to that of the standard, in this case, the R = 5% column.

(b). Go up this column until you come to the rate of growth of the company being analyzed, in this case, 15%. Then, move horizontally to the right until you reach the vertical "R line." Mark this spot.

(c). Locate the columns marked "standard price/earnings ratios." Choose the one with a price/earnings ratio equal to that of the standard, in this case, the P/E = 15 column.

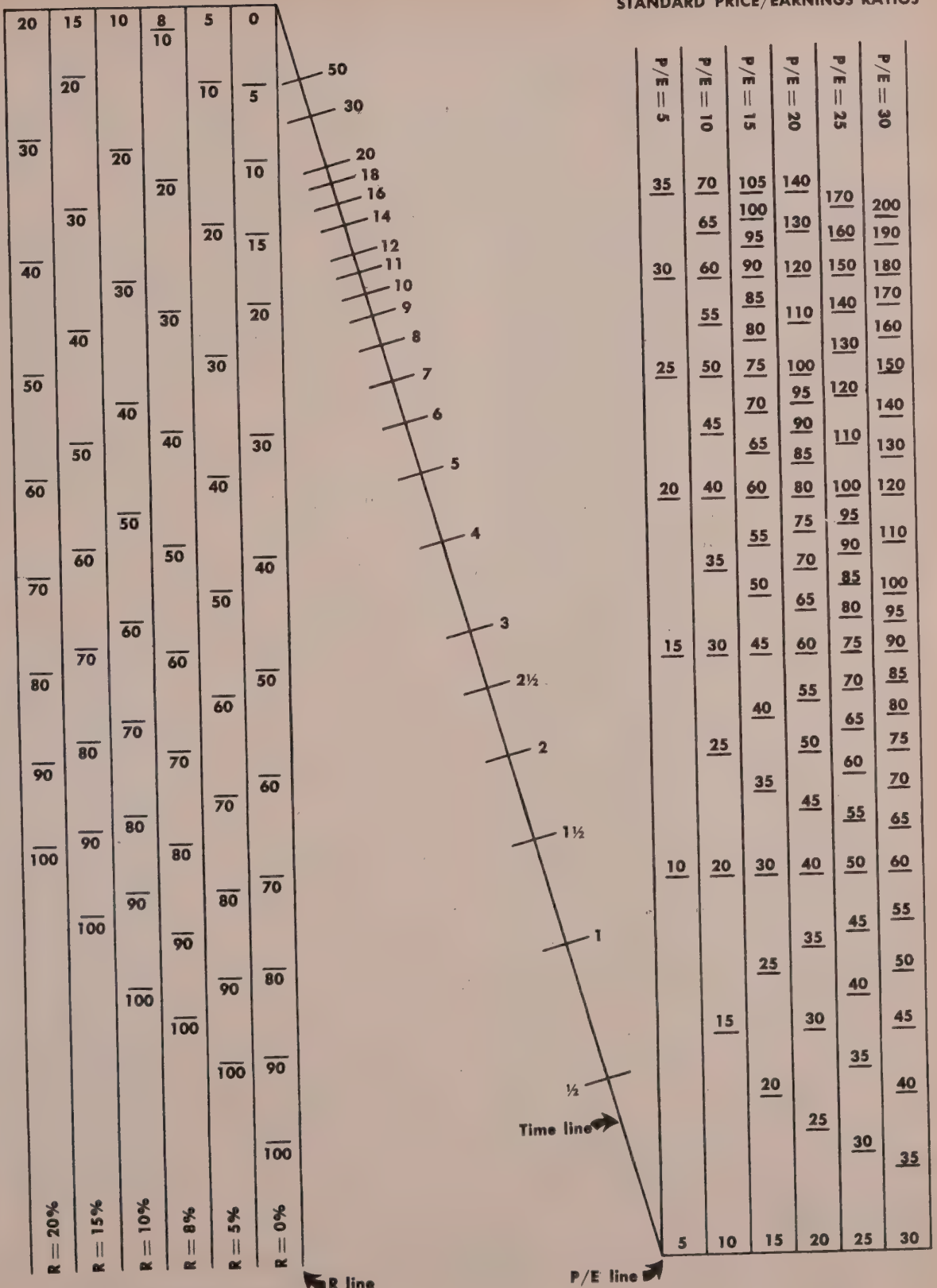
(d). Go down this column until you come to the price/earnings ratio of the company being analyzed, in this case, 50. Then, move horizontally to the left until you reach the vertical "P/E line." Mark this spot too.

(e). Connect these two marks with a straight line and read the number where the line intersects the diagonal "time line," in this case, 13½. This is the length of time, in years, discounted by MMM's price/earnings ratio (50).

This means that if the earnings of the SPI continue to grow at 5% per annum, the earnings of MMM must grow at a compounded rate of 15% for 13½ years in order for an investment in MMM, at its current price/earnings ratio, to show the same percentage appreciation

GROWTH STOCK NOMOGRAPH

STANDARD PRICE/EARNINGS RATIOS



STANDARD GROWTH RATES

*An international builder and distributor
of petroleum, industrial and transportation equipment*

Symington Wayne Corporation

DOMESTIC SUBSIDIARIES AND DIVISIONS

Wayne Petroleum Equipment Division,
Salisbury, Maryland
gasoline pumps and
service station equipment



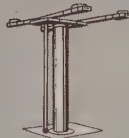
Wayne Industrial Division,
Fort Wayne, Indiana
industrial lifts, rotary pumps,
air compressors, hose reels



Symington Division,
Depew, New York
railroad equipment and
industrial steel castings



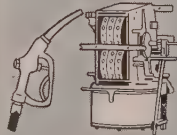
Globe Hoist Company,
Philadelphia, Pennsylvania
automotive and
industrial lifts



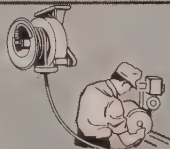
Wagh Equipment Company,
New York, New York
special railroad equipment



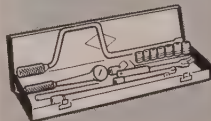
Shields, Harper & Co.,
Oakland, California
sales: petroleum and
industrial equipment



Lang Wayne Equipment Company,
Salt Lake City, Utah
sales: petroleum and
industrial equipment

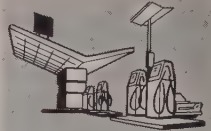


The Sherman-Klove Co.,
Chicago, Illinois
mechanics' hand
service tools

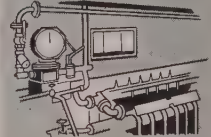


FOREIGN SUBSIDIARIES

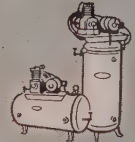
Symington Wayne International Co., Ltd.,
Toronto, Canada • Zurich,
Switzerland • Nassau, Bahamas
service station and
industrial equipment



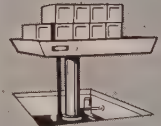
Wayne Tank and Pump Company, Ltd.,
Bracknell, Berkshire, England
metering and gasoline
dispensing equipment



Equipamentos Wayne do Brasil, S.A.,
Rio de Janeiro, Brazil
service station and
industrial equipment



Wayne Pump Canada Limited,
Toronto, Canada
service station and
industrial equipment



**Jurgens & Wayne Apparate
und Pumpenbau, G.m.b.H.,**
Einbeck, West Germany
petroleum dispensing equipment



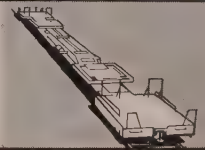
**The Wayne Pump Company
South Africa (Pty.), Ltd.,**
Cape Town, South Africa
service station and industrial equipment



**Vitreous Enamelling Corporation
(Pty.), Ltd.,** Cape Town, South Africa
architectural panels and
enameled signs



**Canadian Wagh
Equipment Company Limited,**
Montreal, Canada
special railroad equipment



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SYMINGTON WAYNE CORPORATION, New York

as a hypothetical investment in SPI, assuming that MMM's growth rate and price/earnings ratio decline to those of the standard at the end of that period.

2. What maximum price/earnings ratio should be paid for a given rate of growth which will exceed that of some standard for a given length of time?

(a). Decide how many years of the company's, in this case, MMM, future growth you are willing to discount by paying a high price/earnings ratio. (For the purpose of this example, use five years.)

(b). Locate this number (5) on the "time line." Mark this spot.

(c). Locate the columns marked "standard growth rates." Choose the one with a growth rate equal to that of the standard, in this case, the $R = 5\%$ column.

(d). Go up this column until you come to the rate of growth of the company being analyzed, in this case, 15. Then, move horizontally to the right until you reach the vertical "R line." Mark this spot too.

(e). Connect these two marks with a straight line and extend the line until it intersects the "P/E line." Note the point of intersection.

(f). Locate the columns marked "standard price/earnings ratios." Choose the one with a price/earnings ratio equal to that of the standard, in this case, the $P/E = 15$ column.

(g). Move horizontally to the right from the point noted in (e) until you come to the standard price/earnings ratio column chosen in (f). Read off the price/earnings ratio, in this case $23\frac{1}{2}$. This is the maximum price/earnings ratio that should be paid.

This means that if the earnings of the SPI continue to grow at 5% per year, a higher price/earnings ratio than $23\frac{1}{2}$ discounts more than five years of future growth at 15% per year.

Interpolation

When using the Nomograph, it is not uncommon to find that the standard price/earnings ratios or standard growth rate, which you wish to use is not represented in the "standard" columns. If this is the case, it is necessary to use a process of interpolation to get the correct discount time. As an example, if the price/earnings ratio of Standard and Poor's 500 stocks was 18 instead of 15, the interpolation would be carried out for Company A as follows:

Locate the price/earnings ratio 45 in both the column labeled $P/E = 15$ and the column labeled $P/E = 20$. Note that 45 in the $P/E = 15$ column is higher than in the $P/E = 20$ column. Since 18 is $\frac{3}{5}$ of the way from 15 to 20, a price/earnings ratio of 45 in a $P/E = 18$ column would be approximately $\frac{3}{5}$ of the way from the 45 in the $P/E = 15$ column to the 45 in the $P/E = 20$ column.

A Note

In the examples we have worked so far, we assumed, in each case, that the price/earnings ratio and growth

of the standard remained constant. This is not strictly necessary. What is necessary, is that these quantities remain relatively constant for a length of time in excess of that discounted by the security under consideration. As an example, if, at the present time, A's price/earnings ratio discounted three years of future growth, relative to B, we would not be interested in fluctuations in the growth rate and price/earnings ratio of B which occurred more than three years in the future. The reason why this is so is that the critical period of growth, as far as an investment in A is concerned, assuming B's rate of growth and price/earnings ratio remain constant during this time, is precisely the discounted three year period.

COMPARING TWO OR MORE COMPANIES WITH EACH OTHER

It is possible to compare two companies as long as one has both a higher growth rate and price/earnings ratio than the other. To do this, simply use the growth rate and price/earnings ratio of the less dynamic company in place of those of the standard. When making this sort of comparison, it should be kept in mind that the results are meaningful only to the extent that the growth rate and price/earnings ratio of the company used in place of the standard remain relatively constant for a greater length of time than that discounted.

An example of this type of analysis would be a comparison between Dow Chemical Company and Allied Chemical Company. This comparison was made in Model, Roland & Stone's *Quarterly Review*, First Quarter of 1958, in an article entitled "Appraising Chemical Equities." As noted in this article, "when an investor pays 24 times earnings for Dow as against 18 for Allied Chemical, he is assuming that Dow will continue to outpace Allied for at least another six to seven years by continuing an assumed 13% per annum rate of growth, vs. 8% for Allied. This six-to-seven year period represents the length of time it would take for Dow's faster growth to offset the price/earnings premium paid for Dow stock as compared with Allied today."

To prove this, we first construct a table showing how earnings grow with time for the two rates of growth 8% and 13%. This is done in Table 4.

Table 4

	0'th year	1st year	2nd year	3rd year	4th year	5th year	6th year	7th year
13% growth rate								
	\$1.00	\$1.13	\$1.28	\$1.44	\$1.64	\$1.84	\$2.08	\$2.35
8% growth rate								
	1.00	1.08	1.17	1.26	1.36	1.47	1.59	1.71

Assuming that, at the end of the 0'th year, Dow sells for 24 times earnings and Allied for 18 times earnings, Dow sells at 24 and Allied at 18. If Dow's rate of growth and price/earnings ratio decline to those of Allied at the end of the first year, the percentage change in the market price of Dow's stock will be:

$$\begin{aligned}
& 100 \times \frac{\text{price at end of first year} - \text{price at end of 0th year}}{\text{price at end of 0th year}} \\
& = 100 \times \frac{(1.13)(18) - 24}{24} \\
& = \text{minus } 15\%
\end{aligned}$$

This compares with a percentage appreciation of 8% in the price of Allied stock over this same period. Performing this calculation for the rest of the years listed in Table 4, and arranging the results in tabular form, we arrive at Table 5.

Table 5

	1st year	2nd year	3rd year	4th year	5th year	6th year	7th year
Percentage appreciation of Dow	-15%	-4%	8%	23%	38%	56%	76%
Percentage appreciation of Allied	8	17	26	36	47	59	71

Table 5 shows that a price/earnings ratio of 24 for Dow discounted six to seven years of future growth at 13% per year, relative to Allied, at that time. The reader should check this result, using the Growth Stock Nomograph.

Analysis of a Single Company

It is also possible to use the Growth Stock Nomograph when dealing with a single company. As an example, consider International Business Machines Corp. which is presently growing at about 20% per year and selling at about 55 times expected 1960 earnings. If we assume that at some future time the company's price/earnings ratio will decline to 20, we can use the Nomograph to find the minimum number of years the company must grow at 20% in order that an investment in IBM will grow, in the long run, at a rate higher than 8%. To do this, simply use 8% as the standard growth rate and 20 as the standard price/earnings ratio. In this case, the discount time is 9½ years. This means that if a price of 55 times earnings is paid for IBM, the company must grow at 20% per year for 9½ years in order to have the investment grow at 8% per year over this period.

Other Uses of the Nomograph

The effective annual appreciation in the price of a stock, over a specific number of years, resulting from a combination of growth in earnings and rise in price/earnings ratio, can be determined as shown in the following example: In this example, assume that the company will grow at the rate of 10% per year for 10 years and that the present price/earnings ratio does not discount this fact now, but will discount it in four years.

(a). Determine a "fair" price/earnings ratio which discounts 10-4-6 years of future growth at 10% per year (in this case, use 18).

(b). Use the "standard price/earnings ratio" column whose P/E is the present ratio for the stock being

studied (for this example, use the P/E = 15 column).

(c). Use the "standard growth rate" column whose growth rate is that of the company being studied (in this case, the R = 10% column).

(d). Locate 18 in the P/E = 15 column. Move horizontally to the left, and mark the appropriate spot on the "P/E line."

(e). Locate and mark 4 years on the "time line."

(f). Connect the points found in (d) and (e) by a straight line, and extend it until it intersects the "R line." Mark this spot.

(g). Move horizontally to the left from the point noted in (f) until the R = 10% column is reached. Read off the number in this column (in this case 15). This is the average annual percentage rise in the price of the stock which will occur over the 4-year period as both the 10% rate of growth and the "fair" price/earnings ratio are realized.

The effective annual appreciation in the price of a stock, over a specific number of years, resulting from a combination of growth in earnings and decline in price/earnings ratio, can be determined as shown in the following example. In this example, assume that the company will grow at the rate of 10% per year, that the present price/earnings ratio is 30, and that the price/earnings ratio will have declined to 20 at the end of eight years.

(a). Locate the "standard price/earnings ratio" column marked P/E = 20.

(b). Go down this column until you come to a price/earnings ratio of 30. Then, move horizontally to the left until you reach the vertical "P/E line." Mark this spot.

(c). Locate the number (8) on the "time line." Mark this spot too.

(d). Connect these two marks with a straight line and extend the line until it intersects the "R line." Note the point of intersection.

(e). Move horizontally to the left from the point noted in (d) until you come to the number 10. Read off the heading of the column in which this number lies (in this case the R = 5% column). This percentage, 5%, is the effective annual percentage rise in price of the stock which will occur over the 8-year period as both the 10% rate of growth and the lower price/earnings ratio are realized.

ADJUSTING FOR DIVIDENDS

We have not considered the fact that many stocks pay dividends which are an important source of profit, in addition to price appreciation. This is especially true in situations where the growth rate is of the same order of magnitude as the dividend yield. In these instances, the neglect of dividends may well result in an incorrect calculation. An approximate adjustment for dividend income, useful in many instances, would be to add the yield to the per share earnings growth rate and use the resultant figure in place of the growth rate.



On the moon . . . and under it

Sometime soon a man will thrust to the vast regions of outer space in an effort to reach the moon.

On the day of the moon-shot certain other things will also happen. A woman will telephone her grocer. A man will sail a boat. A boy will play a trumpet.

Anaconda takes part in both worlds. For example, we manufacture radar and special communications cables, nuclear reactor cables and guided missile cables. They are made to exceedingly rigid specifications and close tolerances. They are dependable.

Anaconda also makes telephone wires and cables—the kind you'll find in your own local phone system. We develop and produce strong, rustproof marine metals for boat screws, fittings and fastenings. Many fine trumpets play better be-

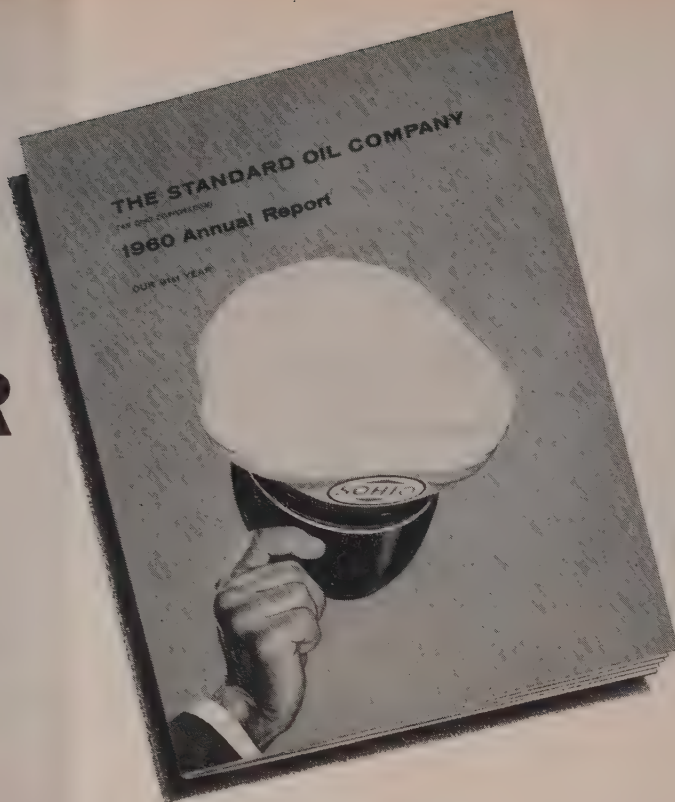
cause their bells and tone chambers are electroformed with our "Plus-4"® Phosphorized Copper Anodes. Through these products as well as through constant development of new copper sources, Anaconda keeps pace with today's needs—big or little.

We like to think that our spaceman will land safely on the surface of the moon. But we're not forgetting that people will continue to live and work in their accustomed ways—under the light of that same moon. Anaconda will be there. On the moon . . . and under it.

ANACONDA[®]

60186 A

SOHIO HAD A GOOD YEAR IN 1960



Results for 1960 were favorably influenced by record sales of our branded products, increased operating efficiencies of the Toledo integrated refinery and other new facilities, and further progress in our efforts to reduce costs. The total physical volume of petroleum products sold was slightly below 1959, reflecting lessened demand for industrial products, particularly heavy fuel oil.

Our market position was strengthened in 1960 through continued modernization and expansion of marketing facilities, further improvement in our products and services, and aggressive advertising and promotion. Plans for 1961 provide for the continuation of these efforts as part of a long-term program to meet the increasing tempo of competition in the oil industry.

HIGHLIGHTS

	1960	1959
Net sales and operating revenue . . .	\$371,676,705	\$368,087,538
Earnings	\$ 24,661,984	\$ 25,060,769
Earnings per share of common stock	\$4.94	\$5.02
Dividends per share of common stock	\$2.50	\$2.50
Capital expenditures . . .	\$ 34,736,222	\$ 40,434,599
Net production of crude oil and other liquid hydrocarbons — barrels . . .	14,402,263	14,213,465
Petroleum products sold — barrels	47,343,105	47,549,929
Crude oil processed at refineries — barrels . . .	50,254,152	50,729,890

for a copy of Sohio's 1960 Annual Report, write to the Secretary, Room 1416:

THE STANDARD OIL COMPANY

(AN OHIO CORPORATION)

Midland Building • Cleveland 15, Ohio

Competition or Price Rigging by Government

by Clair M. Roddewig

THREE BILLS¹ HAVE BEEN INTRODUCED in Congress, two in the Senate and one in the House, which, if enacted, will have the practical effect of directing the Interstate Commerce Commission to prevent the railroads from competing pricewise for the transportation business of the country.

The legislation, if enacted, will assure the supremacy of the railroads' competitors in all fields of commercial transportation—not as a reward for superior public service, but as a consequence of governmental price rigging and restraint of competition.

If these proposals are enacted into law, the railroads will be left with the business their competitors don't find profitable enough to bother with, or which their facilities are incapable of handling.

Congress Enacts New Rate-Making Law

This was precisely the precarious situation into which the railroads were being forced by discriminatory regulation before the enactment of the Transportation Act of 1958.

The 1958 Act gave the railroads at least a fingertip hold on the right to price their transportation services so as to be able to meet the competition of the newer forms of transportation.

Although this right to compete has, to date, proved uncertain and highly controversial, the railroads, nevertheless, have been able to regain some of the business they at one time enjoyed. They also have been able to slow down the inroads their competitors have been making on other business that has been moving by rail; and they have been able to increase their participation in new business.

Railroads' Rivals Cry Foul!

But their competitors are outraged. They are crying "foul." Every freight rate proposed by the railroads to enable them to compete effectively with these newer

forms of transportation is, from their point of view, "discriminatory," "unfair," "predatory," and "ruinous."

The protected competitors of the railroads insist that nothing at all was changed by the 1958 Act—that the Interstate Commerce Commission has erred in interpreting the Act or has been unduly influenced by the railroads. They pointedly suggest that some of the competitive rail rates which the ICC has approved since the 1958 Act are the illegitimate offspring of an "ICC-Railroad combination."

The railroads' rivals have ganged up in an all-out effort to herd the railroads back behind the regulatory stockade, and to fasten the gates so securely that these newer forms of transportation need never again be concerned with competition from the railroads.

Congress Pressured to Nullify 1958 Act

These newer modes of transportation are engaged in a campaign to force Congress to restore the competitive shelter which they have enjoyed since their birth.

Meanwhile, they are continuing their efforts to intimidate the Interstate Commerce Commission, which has been extremely hesitant about loosening the competitive restraint on railroad transportation as clearly intended by the 1958 Act.

They have the support, too, of powerful allies who are the special beneficiaries of these newer forms of transportation, or whose selfish interests are otherwise identified with them. James Hoffa and his powerful Teamsters Union are in the front ranks.

It would appear that the competitors of the railroads have a great deal of confidence in their political strength, demanding, as they do, that Congress rescind a long and carefully considered policy that it adopted only a couple of years before.

Right to Compete Is Key to Survival

The railroads, on the other hand, have confidence in the justice of their position. They believe that when the chips are all down, and the public understands what is involved, the railroads' freedom to compete will be upheld as being in the best interests of the people of this country.

It would be useless to attempt to set the record straight on all of the untruths, half-truths, deceptive statements, self-contradictory arguments, and sheer nonsense that are being ground out by the railroads' competitors in the effort to extinguish the railroads' freedom to compete.

A lot of this propaganda concerns itself with ancient

1. S. 1089 introduced by Senator Yarborough on February 28, 1961, and S. 1197 introduced by Senator Bartlett and others on March 3, 1961. H. R. 5937, introduced in the House March 24, 1961, by Representative Moulder, is identical with S. 1197.

Clair M. Roddewig, president of *The Association of Western Railways*, was named to that position while serving as president of the *Chicago & Eastern Illinois Railroad*. Mr. Roddewig holds a J.D. degree from the *John Marshall Law School*. During World War II he was general counsel for the *Office of Defense Transportation*.

history—with things as they used to be, and not as they are today. The selfish interest behind it is apparent. A lot of it is demagoguery. Most of it probably can be brushed aside; all of it disregards a few facts that add up to plain, everyday common sense.

In a competitive economy, the right to compete is the right to survive. Unless the railroads' freedom to compete is firmly established in the law of the land, government ownership of the railroads is inevitable. There is no middle ground on either of these propositions.

Government in Transportation

Now, consider this: Government in this country is already in the transportation business up to its neck!

Government owns the highways—a public investment of \$150 billion in these transportation facilities.

Government owns the inland waterways—a public investment of more than \$5 billion in these transportation facilities.

With Canada, the United States government owns the St. Lawrence Seaway—an investment by this country, to date, of \$131 million in this transportation facility.

Government owns the airports—a public investment of about \$5 billion in these transportation facilities.

And this list could be extended considerably. It would include the Panama Canal; navigation aids for air and water transportation; harbor improvements; and so on.

Government vs. Private "Roadway Facilities"

How much money is involved? Who knows! Whatever the total, it is many times more than the investment of private capital in railroad rights-of-way, tracks, bridges, tunnels, signals, and the other "roadway facilities" of the railroads.

These "roadway facilities" used by railroad trains are comparable to — indeed, are the counterparts of — the "roadway facilities" owned by government at various levels, and used by the motor vehicles, barges, ships, and airplanes which are owned and operated by private interests in competition with the railroads.

The railroads and the privately-owned pipelines are the only forms of transportation whose "roadway facilities" are not owned by the government.

And it should be reasonably clear that unless the government takes its feet off the necks of the railroads, it won't be long before the government will own them too.

Government's Dual Role: Part Owner and Wrecker of Competition

If the railroads' freedom to compete, as provided by Congress in 1958, is frustrated by the Interstate Commerce Commission, or if the 1958 change should be repealed by Congress as proposed by the pending bills, the commercial transportation business of the nation will be allocated among the various transportation agencies by the simple device of price rigging. All would be as it was before the 1958 Act.

The interests that oppose the railroads know that the railroads can haul most freight more cheaply than they

can, and that the railroads can haul a great deal more freight than they now do, with relatively little additional cost, provided they are allowed to compete.

This ability to compete, of course, jeopardizes the position the newer forms of transportation have attained with the aid of Government, which furnishes their roadway facilities and has been rigging freight rates for their protection.

Government Has a Conflict of Interest

So today, the highway transportation interests are saying to Uncle Sam, and to the state and local governments:

"See here, you've got so much money tied up in highways—and you're committed to put so much more money into them—that you've got to protect commercial highway transportation from railroad competition. If you think you're going to pay part of the cost of these highways with the user taxes you collect, you'd better keep on rigging freight rates for our protection."

The inland waterway interests, which have successfully fought off tolls or user charges, say to Uncle Sam: "You've got a lot of tax dollars sunk in these inland waterways, and while we're not paying you back anything, you're going to get in mighty bad with a lot of our political friends if you don't keep the railroads out of our hair."

The St. Lawrence Seaway interests remind Uncle Sam: "You've spent a lot of money on this job, and you know you've got to spend a lot more before it's finished. But how do you think we can make a success of it if you don't make the railroads keep their rates high enough so that the business will be steered to us. We're supposed to be paying for this seaway through tolls, you know, and you'd better keep in mind where the dough's coming from."

They're interesting questions, aren't they?

Rails vs. Competitors as Local Taxpayers

On the other hand, the railroads pay about \$400 million a year in taxes on their roadway facilities—to state and local governments. These taxes are used for education, police and fire protection, health and welfare purposes, highways, airports, and the other functions of state and local governments.

In contrast, the roadway facilities used by the railroads' competitors, being publicly-owned property, are not taxed at all—although motor vehicles, of course, do pay license fees and fuel taxes for the use of the highways. Such taxes, however, generally are dedicated to the maintenance and improvements of the highways.

To digress a moment, it might be asked why, with the railroads paying taxes of \$400 million a year on the roadway facilities they use, for the support of state and local governments, the railroads' competitors—whose revenues and profits are now more than those of the railroads—shouldn't be expected to make a proportionate contribution to the support of state and local governments, in consideration of the use they make of publicly-owned facilities?

If the United States were to take over the railroads, state and local governments, of course, would lose the \$400 million in taxes the railroads are paying them each year.

It is a pretty safe guess, however, that if the government should ever take over the railroads of this country, it will be through necessity—brought on by government itself—and not in response to any popular demand.

Railroads Continue Indispensable

It is almost inconceivable that the railroads will ever be folded up, and supplanted by other forms of transportation. They are the only form of transportation that can transport "anything, anywhere, anytime." They require less manpower and fuel per ton of freight moved than any other form of land transportation. Last, but not least, the railroads are mass producers of transportation, whose unit costs go down as volume goes up.

This ability to reduce costs through volume, and to obtain volume through reduced charges, is to the advantage of consumers and industry alike. But the public can be deprived of these benefits by regulation that denies the railroads the freedom to compete. And without that freedom, the railroads cannot obtain the volume of business needed to justify lower charges.

The principal threat to common carriers and other types of regulated public transportation today is the growth of private and unregulated transportation. Ninety per cent of intercity travel today is by private automobile. A large and rapidly increasing portion of the intercity freight transportation is now being done by motor vehicles, barges, and even ships, that are not engaged in furnishing transportation for the general public. These are operated by producers, processors, manufacturers, wholesalers, and retailers, for the distribution mainly of their own goods.

Private and Other Unregulated Transport Is Fastest Growing

With the exception of the railroads' new piggyback services, private transportation is the fastest growing form of transportation in this country today.

The reason for the rapid growth of this do-it-yourself type of transportation can only be this: Shippers are finding it more satisfactory to provide their own transportation—either because of greater convenience, or lower costs, or both. The restriction on the freedom of the railroads to establish competitive prices blocks them from effective competition.

The regulated motor carriers engaged in public transportation have been unable to meet this competition for other reasons. Unlike the railroads, their costs do not drop appreciably as they increase their volume. The railroads, on the other hand, with the development of piggyback—that is, trailers on flatcars—are now combining the advantages of truck transportation with low-cost rail haul; and the more business shippers give them, the cheaper they can haul it.

However, even with the change in the rate-making

provision of the Interstate Commerce Act made by the 1958 amendment—a change which could have had no other purpose than to give the railroads freedom to compete—the railroads have been having a difficult time with the Interstate Commerce Commission. Contract rates, guaranteed rates, and volume rates, and other competitive rates are invariably opposed by the railroads' competitors. The Interstate Commerce Commission has allowed some of these to go into effect; it has knocked out others.

For instance, a few weeks ago the ICC ordered the New York Central to cancel a contract rate that it had put into effect nearly a year before. The rate was contingent on volume. Such rates are permitted in Canada, Britain, and France. No shipper had complained—only the motor carriers and the water carriers. The Commission, in what appeared to be a far-reaching decision, declared that the rate constituted "a destructive competitive practice within the meaning of the national transportation policy." "The inevitable effect of a contract rate," it stated, was "to destroy competition for the duration of the contract."

Competition Basis of U. S. Economy

A sharp dissenting opinion pointed out the obvious—that "any competition tends to be destructive of competing interests in some degree." An attempt, "by means otherwise lawful," to stem diversions or to regain traffic, "can hardly be called unduly destructive."

The Commission used its interpretation of the meaning of the national transportation policy in another recent and astounding decision to circumvent the 1958 Act and raise a "rate umbrella" for the protection of a water carrier operating between the East Coast and Texas. The Commission arbitrarily pegged railroad piggyback rates at 6% higher than rates for similar service by a water carrier.

The people of this country are firmly committed to fair competition. They recognize competition as the motivating force that pushes the economy of the United States, and the standard of living of its people, ever upward!

Witness the anti-trust laws of the United States and their vigorous enforcement by the Department of Justice.

Witness the fines recently imposed on 29 of the country's largest manufacturers of electrical equipment for collusion in curtailing competition through price fixing.

Witness the jail sentences imposed on seven of their officers for participating in this collusion to restrict competition.

Witness the breaking up of some of the largest industrial empires in the nation because they were found to have been engaged in practices that restricted competition.

But look who is restraining competition in the transportation industry! Look who is doing the price fixing! It's the same government that is enforcing competition elsewhere. It's the same government that is hauling

offenders into court, fining them, and sending some to jail!

Facts Explode Monopoly Myth

"But," wail the railroads' competitors, "the railroads are big fellows; they can put us all out of business! They are monopolies and have to be restrained!"

And that may have been true a long, long time ago.

Half a century ago, practically all of the intercity travel in this country was by railroad train. Today, 90% of the intercity travel is by private automobile, 2¾ % by bus; 4-2/5% by airplane; and 3% still travel by railroad.

Times and conditions do change!

Half a century ago, practically all of the intercity freight movement in this country was by railway. Today, other forms of transportation—motor carriers, both regulated and unregulated, pipelines and barge lines, ships and airplanes—account for more than half of this business; or 56%. The railroads' portion has dropped to 44%.

The regulated motor carriers' traffic volume last year, measured in ton-miles, was three times what it was in 1946. By contrast, railroad freight business last year, also measured in ton-miles, was 4% less than in 1946.

Comparable figures for the transportation service performed by unregulated motor vehicles are not available. It is estimated, however, to be about twice that of the regulated motor carriers. This is the type of transportation that is growing at a phenomenal pace.

A recent government study predicts that private and exempt carriage (by water, pipeline and air, as well as by highway) can be expected to account for half of the intercity freight not later than 1975.

Rails Retain Lead in Low-Rated Freight

The revenues of the regulated motor carriers alone in 1960 are estimated at \$7½ billion. The railroads, revenues for the transportation of freight, mail and express were about \$9 billion.

The railroads hauled most of the heavy, bulky and least valuable traffic—which, of course, moves at the lowest rates, and is the least profitable to handle. This is evidenced by the fact that the railroads, to collect the \$9 billion that shippers paid them, had to transport 6 times as many ton-miles of freight as the regulated motor carriers transported to earn \$7½ billion.

Times and conditions do change, indeed.

The situation today is a far cry from the monopolistic bogeyman image of the railroads that their detractors are trying to convey to the public.

The railroad industry, for its part, has no desire to detract from the images their competitors have built for themselves—a spectacular rise from infancy, generated by initiative and enterprise, to the creditable positions they have now attained, where some of them in the motor carrier field now surpass good-sized railroads in

miles of road service and gross revenues. Nor is there any wish to detract from their claims of important benefits accruing to shippers and the general public from their varied services.

But if these images represent the whole story, why are they all so insistent that price rigging by government take the place of fair competition?

Competition or Price Rigging?

If all forms of transportation have an equal opportunity to compete and are not permitted to engage in unfair competitive practices, then if one form of transportation succeeds in getting more patronage than another, it will be because that form of transportation is giving shippers the kind of service they want at prices the shippers are willing to pay.

Isn't that the way it should be?

From the standpoint of the interests of the public, isn't that better than having a body of regulators deciding what business shall go to whom, rigging freight rates accordingly, and then justifying their decisions by obstinate misinterpretations of the "meaning of the national transportation policy"—decisions that wholly ignore the condemnation of price rigging written into the Interstate Commerce Act by Congress in 1958?

Survival of American Economy at Stake

And who is going to take issue with what Federal Judge J. Cullen Ganey said in imposing the fines and sentences on the electrical equipment manufacturers?

"What really is at stake here," he declared, "is the survival of the kind of economy under which America has grown to greatness—the free enterprise system.

"The conduct of those who had conspired to restrict competition by price fixing," he continued, "had flagrantly mocked the image of that economic system of free enterprise which we profess to the country, and destroyed the model which we offer today as a free world alternative to state control and eventual dictatorship."

These words are of historic significance.

Their application to what has been going on in the regulation, by government, of the business of transportation in this country, and the two rate-rigging bills now before Congress, deserves the sober consideration of every member of Congress. Judge Ganey's words deserve similar respect by all those who are occupied with the administration of present regulation of transportation.

The Court's observations should have a very special meaning to everyone who appreciates the American standards of living, which have their roots in individual initiative, personal incentive, and private enterprise, and blossom only in the climate of fair competitive freedom.

Better goods and services and increased productivity are not the results of restraining competition and rigging prices.



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Memo to United Gas Corp. Shareholders from James A. Wilson, Vice President



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W O R L D ' S L A R G E S T H A N D L E R O F N A T U R A L G A S

PROFITING BY PARKINSON'S LAW

by R. E. Kennedy, Jr.

ONE OF THE MOST HUMOROUS, yet also profound literary documents of contemporary civilization is a celebrated little book entitled *Parkinson's Law* by the notable English historian and wit, C. Northcote Parkinson.

Clearly, this book is a caricature of the "organization man" and his propensity toward work multiplication, which is found today in all walks of organizational behavior. It is, of course, most clearly manifested in the field of Public Administration (i.e., bureaucracy), but with some effort, one can see that it permeates all organizational life: the church, the state, the corporations, the universities, and even financial institutions. The good humor notwithstanding, there is a "moral imperative" which rings out from the book, saying: "Let's cut the red tape, and get back to work—real work, that is." In a welfare economy, this "imperative" will not be heeded, so we need not bother with it in the sequel.

If Parkinson's views of contemporary organization life have merit, and I think they have, then numerous implications can be drawn. Among these are ones which, it seems to me, should provide many opportunities for inveterate players of the stock market. Indeed, since "growth" is the byword of Wall Street, surely we can discern a few growth areas arising from the operation of Parkinson's Law. But before launching into this effort, logical priority must be given to Parkinson's Law itself. For those unacquainted

with its insidious operations, it seems worthwhile to review briefly how the "Law" works.

The Elasticity of Work

In its simplest form, Parkinson's Law states that "work expands so as to fill the time available for its completion." All of us know persons who busy themselves with a task, and constitute living proof that it takes three days to do what the normally industrious person can do in one day. These persons have somehow managed, sometimes without conscious effort, to stretch the work over time, and indeed, to massively increase its content (quite unnecessarily).

So, what started as a simple task is transformed, along the way, into a monstrous workload. These "dedicated" souls create so much work in the process of "working" that, if carried to its logical absurdity, they could never finish a job. To say the least, they create a great deal of work for their associates. Thus, a thing "swells in its importance and complexity in a direct ratio with the time to be spent." Work is elastic with respect to time.

This being the case, there is no necessary correspondence between the work to be done and the size of staff to which it is delegated. Indeed, in many organizational pursuits, these are not related at all. Or as Parkinson so aptly expresses the matter: "The fact is that the number of officials and the quantity of work are not related to each other at all. The rise in the total of those employed is governed by Parkinson's Law and would be much the same whether the volume of the work were to increase, diminish, or even disappear. The importance of Parkinson's Law lies in the fact that

it is a law of growth based upon an analysis of the factors by which that growth is controlled."

Concrete evidence, bearing on this proposition, is taken from two British cases. One is the case of the British Admiralty in which, between the period of 1914 and 1928, the Royal Navy diminished one-third in men and two-thirds in ships. Yet, Admiralty officials grew by 78%, or 6% per annum, and "this growth was unrelated to any possible increase in the work." Doubtless, this produced a "magnificent navy on land." Similarly, the administrative official staff of the Colonial Office expanded from 372 to 1,661 people, or 6% growth per annum, during the years from 1935 to 1954. This would not seem peculiar except for the fact that the overseas empire was on the decline and there were less people to govern.

Toward a Staff Multiplier

Two axioms are immediately discoverable in the operation of Parkinson's Law: "(1) An Official wants to multiply subordinates, not rivals, and (2) Officials make work for each other." To illustrate these axioms, we may conjure up a career-minded Civil Servant (in the U. S. or in Britain) who, in the interest of matching wits with a mounting workload (which he largely created for himself) and of gaining a muchly overdue promotion, proceeds to practice a bit of "gamesmanship." Now the expanded workload could easily be handled through the employment of one assistant. But this won't do. So, he requests two assistants. (Parkinson's Law is operating.) Dividing the work with but one assistant implicitly recognizes the equal status of the assistant, not to mention the fact that this new man

Dr. Robert E. Kennedy, Jr., is Associate Professor of Finance at the College of Business Administration, University of Arkansas, and a general partner in the Dallas, Texas, firm of Palmer-Kennedy, specializing in financial and stockholder relations.



80TH *Annual Report* **Canadian Pacific** RAILWAY COMPANY

Extracts from the report of the Directors to the Shareholders:

There was a slowing down in the rate of growth of the Canadian economy in 1960. Although the gross national product was about the same as in 1959, industrial production lagged during a good part of the year and construction activity dropped sharply. Notwithstanding current economic difficulties, there is no ground for lack of confidence in the future. Accordingly, your Company pressed forward its program of improving facilities and services. In the transportation field the dieselization program was completed, additions were made to the modern train signalling system already in operation over various stretches of main line track, and piggyback and merchandise services were further expanded. The freight traffic department of your railway was reorganized in order to increase the effectiveness of sales effort. An important international route was added by your Air Lines, and the "Empress of Canada" was launched. In other fields, existing communication services were extended to new areas, a new wire-photo facsimile service was inaugurated, and exploration and development of your oil and gas interests in Western Canada continued.

The MacPherson Royal Commission on Transportation which was appointed in May of 1959 continued its hearings throughout the year and the report of the Commission is expected by March 31, 1961. Any remedial action regarding the statutory rates on grain and grain products will necessarily be delayed until the Commission has made its report to the Government of Canada.

Following the failure of the Conciliation Board to bring about a settlement of the dispute between the railways and the unions representing the non-operating employees, the unions declared their intention to strike on December 3. The strike was averted under an Act of Parliament, expiring May 15, 1961, which provided for the continuation of the operation of the railways.

Railway revenue was 4% below that of 1959. Most of the decrease was in freight revenue but passenger revenue was also lower, reflecting in part the policy of your Company of reducing unprofitable passenger train mileage wherever possible. In view of lower revenues, it was necessary to curtail expenses and a reduction was effected despite increased labour rates and material prices. Net railway earnings, at \$33.7 million, decreased 7% and provided a return of 2.5% on your net investment in railway property.

Income from sources other than the railway amounted, after income taxes, to \$12.4 million, a decrease of \$276,000. Increases in dividends from The Consolidated Mining and Smelting Company of Canada Limited and in earnings from hotels and communications were offset by a loss from your steamships compared with a profit in 1959, an increased loss on your Air Lines, and a decrease in net income from petroleum rents, royalties and reservation fees, partly owing to the transfer of certain mineral rights to your wholly-owned subsidiary, Canadian Pacific Oil and Gas Limited.

Net Income, after fixed charges, totalled \$29.0 million. After providing for dividends of 4% on Preference Stock, income per share of Ordinary Stock amounted to \$1.81, as compared with \$1.97 in 1959. After dividends on Ordinary Stock totalling \$1.50 per share, a balance of \$4.4 million was available for modernization and other corporate purposes.

Capital expenditures totalled \$71 million. Of this, \$53 million was expended on railway plant and equipment, \$9 million on aircraft leased to your Air Lines, \$4 million on steamships, \$3 million on communication facilities, and the balance on hotels and other properties.

Canadian Pacific

Canadian Pacific

INCOME ACCOUNT

	1960	1959
airway revenue.....	\$ 457,105,482	\$ 477,805,874
airway xpenses.....	423,430,812	441,759,581
Net Earnings....	\$ 33,674,670	\$ 36,046,293
Other Income...	12,402,177	12,677,751
	\$ 46,076,847	\$ 48,724,044
Fixed Charges..	17,105,571	17,435,113
Net Income.....	\$ 28,971,276	\$ 31,288,931
Dividends:		
Preference Stock \$	3,096,742	\$ 3,029,053
Ordinary Stock..	21,498,684	21,497,897
	\$ 24,595,426	\$ 24,526,950
Balance trans- ferred to Re- tained Income Account.....	\$ 4,375,850	\$ 6,761,981

HIGHLIGHTS

Year-end Position

Working Capital. \$	98,628,477	\$ 89,960,458
Investments....	164,196,298	156,967,926
Properties.....	2,360,364,489	2,349,479,762
Funded Debt....	172,874,316	186,463,477

Tax Accruals

Income Taxes... \$	26,270,000	\$ 27,260,000
Property and Other Taxes..	13,291,594	11,715,342

Traffic

Tons of Revenue Freight Carried	56,923,940	57,878,732
Revenue Passen- gers Carried....	7,058,767	7,739,503
Revenue per Ton Mile of Freight	1.52c	1.57c
Revenue per Passenger Mile	3.03c	2.99c

Employees

Employees, All Services.....	74,037	79,882
Total Payroll... \$	306,869,026	\$ 321,985,962
Average Annual Wage..... \$	4,145	\$ 4,031

Canadian Pacific

would constitute his only possible successor. No, this definitely won't do.

Thus, two assistants are hired. This produces several advantages for our Civil Servant. He is the only one who can comprehend the work of both. He can keep his assistants in check by their fear of the other's promotion. Then, too, he can capture a bit of extra prestige from an expanding staff organization.

In the course of time, it is inevitable that one of his juniors complains of being overworked. Whether this happens to be true or not is irrelevant. Now our junior executive cannot have an assistant unless the other is similarly equalized. But again, one assistant for each will not do. Thus, four additional subordinates are put on by our Civil Servant, all in the interest of avoiding internal frictions, insuring his promotion, and maximizing human relations. The process continues, at something like an exponential rate, so that "seven officials are now doing what one did before."

In this process, it is erroneous to assume that any one is idle. To the contrary, all are quite busy; indeed, busier as time progresses. If we should intervene into this process, what will we likely find them doing? Undoubtedly they will be filling out endless forms (in fact, creating new forms); writing memos; letters; transmittals; reports; doing studies; deleting; rewriting; and duplicating these literary efforts. Thus, they create a veritable flood of paper work for each other to scrutinize, sign and pass on the next man. The administrative work continues to mount. The paper work exfoliates, governed by its own laws of growth. It is an open-ended process, one bearing a resemblance to cancerous growth, which ultimately must overcome the organization. Put in the meanwhile, it appears healthy, robust, full of life and energy, and above all, growing (a sure sign of progress!).

Besides administering and coordinating paper work, our imaginary Civil Servant must turn to other problems created by his synthetic organizational unit (which has now

grown much larger). He now has personnel problems (personality clashes, conflicts, jealousies); political intrigue (one of his assistants is breathing down his neck); files are jamming up, producing a need for new filing clerks and cabinets; and extra secretaries must be hired (yes, we need an Office Manager to supervise the growing secretarial group). Finally, the unit needs more space into which to spread its "useful" operations. Thus, the process expands inexorably, from which we can see that "administrators are more or less bound to multiply."

Staffing the Economy

Parkinson's Law has one important implication at the outset: it tends toward full employment. If its operation seems somehow diabolical, at least it meets the test of the Employment Act of 1946. There is implicit in Parkinson's Law a multiplier concept, which perhaps should rank in importance with Keynes' investment multiplier, or the demand deposit multiplier in the banking system. It applies to administrative employment, such that the employment of one paper-pusher in the economy entails the need for several others elsewhere in the economy, to process the growing paper work. Thus, like Keynes' propensities and multipliers, we should formulate and develop similar propensities and multipliers for our "staff economy." (Wouldn't this make a magnificent subject for a Ph.D. dissertation?).

Since the operation of Parkinson's Law is widespread (empire building goes on everywhere), then it must have implications for nearly every kind of organizational (togetherness) activity. What of its implications for the future of business organizations? We hear much talk that automation will so alter the productive process as to create massive unemployment. This is nonsense! *Parkinson's Law will bail us out.* The thinning line of production technicians will be assisted by a massive growth of staff employees of all types and shades. Enormous internal and external staffs will mushroom. Quite naturally, the growing staffs, being susceptible to the charge

of "paperbedding" (which is to business what "featherbedding" is to labor), will come to be governed by a superstaff known as the "Office to Prevent the Operation of Parkinson's Law." Ultimately, this may become the major staff function of organizations, dwarfing in size and consequence the other staffs which it presumably controls.

Parkinson has addressed himself to the conscious, deliberate efforts of "Status Seekers" to achieve organizational success. But an equally insidious, yet indirect, process is at work. While Department "A" is expanding its staff and paper work through the conscious ambitions of one boss, it nevertheless creates a profusion of work for other departments, and like it or not, these departments must put on more personnel to handle the enlarged workload. All this happens within the firm. Externally, massive outgoing mails, sent to other business institutions, creates a further need for the receiving organizations to hire additional paper-pushers. And so it goes, tending toward "gainful" full employment.

One further implication is noteworthy. We hear much of "cost-push inflation" attributed to the strategic power of labor unions. This is bound to pass since staff employees (who will be in the ascendancy) will be defined as members of management, not labor. This job classification, along with the effects of automation, should eventually reduce labor unions to insignificance. But we will then be faced with a new kind of inflation: "staff-push inflation." How can we reckon with this? No one knows, but we can hint at a partial solution: increase or lower stamp and paper prices to control mail flows like Federal Reserve policy controls money flows. Naturally, this will require a new superagency, at the Federal level, but we may rest easily that it is intended to bring the new kind of inflation under administrative control.

Cashing in on 'Paperbedding'

With the operation of Parkinson's Law becoming well-nigh a universal phenomenon, it should quite natu-

rally generate a few possibilities in the stockmarket for keenly perceptive investors. After all, Parkinson's Law—when and where it is found to operate on a massive scale—seems to point to a "growth industry" rate of expansion. At least it should help to sustain (if not to cause) the growth rate of those industries and companies somehow linked with the operation of Parkinson's Law. A few examples come rather quickly to mind.

Paper. The paper and associated industries, of course, top the list as suitable growth candidates. The mushrooming nature of paperwork, which knows no bounds, is wholly dependent on paper and paper supporting industries (such as tree farming, chemical processing, wood pulp, pencil making, and so on). As one sage recently put it: "The first flood was water; the next flood will be paper." Also, we should not fail to mention those inventive firms which must furnish the variety of printed business forms by which the economy keeps track of its "performance."

Office Equipment. When administrators, coordinators and office clerks are multiplying (as they inevitably will do), they must be equipped with the latest in prestige-building office furniture: desks, filing cabinets, calculators, dictating machines, typewriters, water coolers, etc. Likewise, this will have an impact on photography (microfilming) and duplicating machines. New storage and office space must be built, giving a welcome shot in the arm to the construction industry.

Computers. As staff work becomes increasingly massive and complex (this being a function of time over which work is spread), there derives a fundamental desire for rapid-performance data processing machines and electronic computers. The mounting paper work, nearly out of hand, can only be efficiently handled by electronic robots. With respect to electronic computers, this author's variant (Kennedy's variant) of Parkinson's Law may be suggested: *Work expands so as to fill the computer's available time.* Thus, a department's prestige

is proportional to the amount of time it employs the machine, regardless of the substantive character of the work to be done. Looking to the future, firms will find it necessary to hire Machine Psychiatrists, to treat the neurosis of the almost human-glutted computers. (This will doubtless be called "machine therapy" or "computer adjustment.")

Publishing. This is certain to be a booming industry. How can it be otherwise? One area of prodigious growth, in recent years, has been the expanding number of professional journals and magazines. Since an essential criterion for promotion at academic institutions is the mass production of literary efforts, it follows that new publications must be invented, almost monthly, to accommodate the onrush of these "creative" urges. [Hear! Hear!—Ed.]. By some rare and strange logic, these literary efforts are called "research." However, when the truth is fully known, it will be found that most academic articles are designed, not to advance the state of the arts, but rather, to advance the state of the authors (usually from Assistant to Associate Professor).^{*} In all such "research," the formation of knowledge is merely secondary, and indeed, accidental.

Once such "research" commences, to be finally synthesized into publishable form, the mechanism of Parkinson's growth is already well underway: research money is demanded; teams are organized; growing clerical staffs must be formed; computers whir. New "specializations" in the arts may even grow out of these efforts. Naturally, new professional journals, to accommodate the proliferating thought streams, must be launched. Herein lies the inexorable logic of Parkinson's Law.

If, at some point in the editorial process, the proper test of publishing any literary effort is applied—that is, by asking the question: so what? — the publishing industry might be set back 50 years. (If the editors of this magazine should happen to take this occasion to enforce

^{*}(You said it, we didn't—The Editors).

the "literary test," I'm afraid this article will remain forever in unpublished form.)

Consulting. There has been a recent upsurge in professional consulting and service firms "coming to market" for funds. These firms I elect to call "external staffs," because they serve clients in much the same way that "internal staffs" do. The advantage to clients in using "external staffs" is that they are terminable by contract. But "internal staffs" are not so easily terminable; indeed they hang on to the bitter end. (Remember, we must not disemploy internal staff people; this upsets "human relations"—the new myth). Consulting and service firms can now be found in nearly all areas where Parkinson's Law operates best; so there are certain to be numerous growth opportunities here.

By some imaginative thought, the human mind should be able to produce a comfortably large list of investment possibilities arising from the fertile implications of Parkinson's Law. We have failed to mention many other investment areas which should attract your attention; i.e., for those masterfully playing the game, the drug and distilling industries (tranquilizers and good whiskey) should continue to prosper. Yes, the implications abound.

Finally, if you propose to lay your bets on Parkinson's Law, and to select your securities accordingly, then you might be led to employ another of his famous laws, namely the Law of Triviality (especially as it applies to high finance), which states that "the time spent on any item of the agenda will be in inverse proportion to the sum involved." Now you are getting the idea.



INTERNATIONAL HARVESTER COMPANY

The Directors of International Harvester Company have declared quarterly dividend No. 171 of one dollar and seventy-five cents (\$1.75) per share on the preferred stock, payable June 1, 1961, to stockholders of record at the close of business on May 5, 1961.

GERARD J. EGER, Secretary



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Highlights From Our 1960 Annual Report...

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- power generation reached a new efficiency peak at 10,455 btu/kwh
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An ICONORAMA system is now operational at NORAD (North American Air Defense Command) headquarters in Colorado Springs, Colorado. This system provides NORAD's Commander-in-Chief and his staff with the total visual information available on which to base decisions for the aerospace defense of Canada and the United States against enemy air or spatial attack. ICONORAMA, designed and developed by FF&M Electronics, Inc., a subsidiary of Ling-Temco Electronics, Inc., is a data processing and display system which records the movements of multiple airborne objects and projects their paths on a graphic display to help in vital judgments.

From NORAD, the information ICONORAMA displays, and interpretation of its meaning by NORAD's Commander-in-Chief, provides the second-to-second situation in our continent's security for the U. S. President and Canada's Prime Minister; the U. S. Joint Chiefs of Staff and Canada's Chiefs of Staff Committee.

Recent decisions have given operational control of all detecting and tracking equipment to NORAD, including the already operational BMEWS (Ballistic Missile Early Warning System) and Space Track, as well as upcoming Satellite Surveillance Devices . . . all USAF systems; SPASUR (Space Surveillance Detection net) of the U. S. Navy.

NORAD ..KEY to Continental Aerospace Defense



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ICONORAMA ..part of NORAD

ICONORAMA'S display keeps the Canadian Chiefs of Staff Committee and U. S. Joint Chiefs of Staff posted minute to minute on the situation; NORAD's Commander-in-Chief, in conduct of the aerospace battle, gives orders and instructions which cause . . . ■ the U. S. Office of Civil and Defense Mobilization (OCDM) to signal the civilian populace of impending enemy strike; ■ Canada's Department of Transport and U. S. Federal Aviation Agency (FAA) to ground all civilian and nonessential flying to clear the air for combat; ■ all U. S. Air Force, Army, Navy and Royal Canadian Air Force air defense elements — such as jet fighter interceptors with atomic rockets and all guided missiles with nuclear warheads — to prepare for battle to protect Canadian-U. S. bases, people, resources, seats of government, and our will to resist; ■ permit SAC (Strategic Air Command) to get its planes aloft, its missiles ready for retaliation.

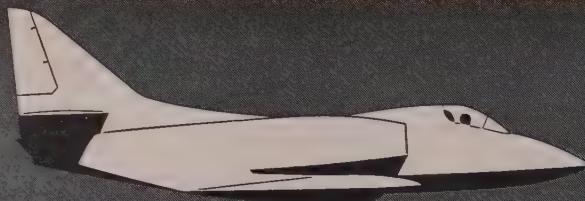
Eventually, the whole of NORAD's Combat Operations Center, together with ICONORAMA, and all the supporting communications and data processing will be placed underground in Cheyenne Mountain in Colorado. This single location, where all correlating and evaluation of the enemy threat takes place, will thus be much more safe and secure. ICONORAMA, as a part of NORAD, is an important contribution to the deterrent forces which — as long as they keep the peace — give North America and the free world a 100% effective defense. Should the deterrent fail, NORAD's forces constitute the main chance for major population and military survival to wage that war to a conclusion most favorable to our interests.



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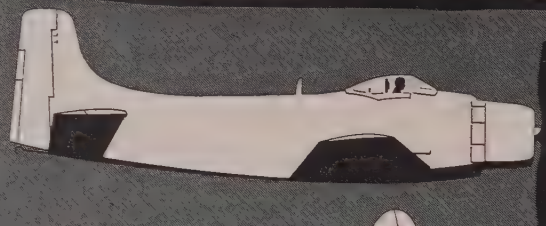


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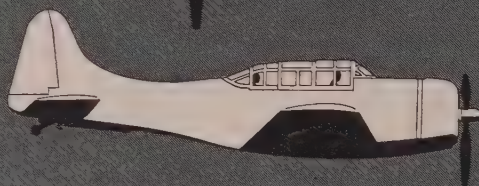


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Douglas AD-4 Skyraider —
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more destructive than a
light cruiser's!



Douglas SBD Dauntless —
the backbone of the Navy's
air strikes during World War II.
More than 5000 produced!



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saw action at Midway!



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The new Douglas A4D-5 Skyhawk — a powerful ace-of-all-trades for the Navy — is the result of the same imaginative engineering that has brought Douglas to the forefront in commercial aviation and the push into outer space.



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Freight Traffic on the Ohio River

by Charles E. Landon

THE OHIO RIVER has had a remarkable growth in freight traffic during the past quarter of a century (*see table*), and now transports a greater annual tonnage of products than any other stream in the United States, if the foreign and coastwise tonnages from Baton Rouge southward on the Mississippi River are excluded.

For the 12-year period, 1946-1957, the average annual internal tonnage on the Mississippi was 49,484,849, and on the Ohio, 55,746,089. Since the war, internal tonnage on the Mississippi has exceeded tonnage on the Ohio in only one year; in 1954 the Mississippi transported 55,963,201 tons, the Ohio, 55,076,667 tons.

Ton-miles are greater on the Mississippi, however, indicating a longer average haul than on the Ohio. The average annual ton-miles of internal traffic on the Mississippi was 18 billion for the 12-year period, 1946-1957, compared with 10.4 billion on the Ohio.

A small number of product groups supplies almost all of the traffic on the Ohio. For the five-year period, 1953-1957, coal contributed approximately 52% of the average annual tonnage; products of the petroleum industry about 21½%; and sand, gravel, and stone (includes crushed limestone) 14%. Products of the iron and steel industry and industrial chemicals comprised most of the remaining tonnage. The chemical industry has grown rapidly in the Ohio valley since the war.

Reasons for Growth of Traffic

The immediate reason for the growth of tonnage hauled on the Ohio has been the tremendous expansion of manufacturing throughout the Ohio valley. More fundamental, and providing the basis for much of the industrial growth, are the coal fields of the area and the improved river itself. Important, too, is the central location of the area, marketwise.

Another group of factors has made the Ohio more available to shippers. This group includes technological improvements in river equipment and the provision of modernly-equipped terminals, both of which have made possible a more effective organization and use of waterway equipment. These influences have reduced the operating costs of water carriers and hence have improved their competitive position.

The Ohio valley contains one of the greatest concentrations of manufacturing industries on earth. Expansion has been especially rapid since the war. Most of the new investment has been in four groups of heavy industry: iron and steel, thermo-electric generation, atomic energy, and industrial chemicals. From the end

of 1950 to March 1958, the steel industry had actual and announced expenditures of a little more than \$2 billion in the counties bordering on the Ohio and its navigable tributaries. Corresponding figures for thermo-electric plants, atomic operations, and chemical plants were respectively, \$3 billion, \$1.8 billion, and \$1.2 billion.

These industries attract to their locations many "satellite developments" such as fabricating plants, rolling mills for non-ferrous metals, and further steps in chemical manufacture, each one feeding upon the output of a more basic product. There has also been new investment in counties not bordering directly on the rivers. One estimate places the total investment in new manufacturing facilities for the eight years, 1949-1957, at \$13 billion.

An excellent example of satellite plants is found in

**Tons and Ton-Miles of Freight Traffic
on the Ohio River, 1925-1957**
(in thousands)

Year	Tons	Ton-miles
1925	15,737	825,497
1926	19,755	1,101,629
1927	20,129	1,214,491
1928	20,938	1,344,087
1929	21,955	1,512,585
1930	22,337	1,473,927
1931	18,071	1,486,445
1932	14,317	1,392,229
1933	16,751	1,708,422
1934	18,636	1,783,925
1935	20,977	2,253,829
1936	24,384	2,652,870
1937	23,357	2,671,926
1938	20,587	2,578,825
1939	25,955	3,360,454
1940	29,549	3,852,508
1941	36,567	5,197,440
1942	38,281	5,299,847
1943	36,610	5,996,347
1944	37,801	7,004,056
1945	33,868	6,064,699
1946	35,851	4,999,560
1947	41,397	5,746,076
1948	42,792	6,585,854
1949	41,300	6,904,147
1950	48,598	8,800,451
1951	56,541	9,760,268
1952	55,957	10,362,201
1953	62,034	11,757,310
1954	55,077	11,556,889
1955	71,461	14,901,321
1956	76,377	15,999,405
1957	81,567	17,209,734

Source: Annual Reports, Chief of Engineers, U. S. Army before 1953: Waterborne Commerce of the United States, Part 2, (Annual) Corps of Engineers, Dept. of the Army, subsequent to 1952.

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the chemical industry located at Calvert City, Kentucky (this city is on the Tennessee River about 30 miles from its junction with the Ohio). First, in 1949, the Pennsylvania Salt Manufacturing Company (now Pennsalt Chemicals Corporation) built a plant for making hydrofluoric acid from fluorspar deposits found in the area. Soon, after, the Pittsburgh Metallurgical Company placed a ferroalloys plant at Calvert City and the Air Reduction Company, through a subsidiary, a plant for making calcium carbide and acetylene.

Then, the B. F. Goodrich Rubber Company located a plastics factory at Calvert City which utilized chemical products of the other three companies. Still later, the General Aniline and Film Corporation located at Calvert City in order to use acetylene from the Air Reduction Company and hydrogen from Pennsalt Chemicals Corporation for producing drugs and artificial blood plasma. Another new company, American Aniline and Extract Company, has a polyvinyl plant which utilizes chemicals from a new plant of the Air Reduction Company.

By 1956 Calvert City reported an investment of almost \$90 million by the chemical industry. A similar development has taken place in the New Martinsville-Natrium-Moundsville district of West Virginia just below Wheeling. The first plant was built in 1943 and the investment now amounts to more than \$130 million. An important factor in the development of this center is a salt deposit 40 feet thick underlying the area. There are also other salt deposits containing immense reserves in northern West Virginia.

Aluminum Manufacture

One of the outstanding developments has been the establishment of aluminum manufacture. The Alcoa plant at Yankeetown, Indiana, the Kaiser Aluminum and Chemical Corporation plant at Ravenswood, West Virginia, and the Olin Revere Metals Corporation plant at Clarington, Ohio, represent an aggregate investment of more than a half billion dollars. When completed these three establishments will produce 25% of the nation's supply of aluminum.

There are several areas of industrial concentration along the Ohio. One area is comprised of the cities near the junction of the Tennessee and Ohio rivers—Calvert City, Paducah, and Joppa. A second area is found where the Green River enters the Ohio, and it includes Evansville, Yankeetown, Henderson, and Owensboro. Next are the older but still growing centers at Louisville and Cincinnati. During the period, 1946-1956, Cincinnati became the home of 300 new firms and 930 of the existing ones completed expansions or improvements, involving in total capital expenditures of \$573 million. Another area contains the cities of Portsmouth, Ironton, Ashland, and Huntington, and probably Ravenswood. Last, there is the area extending from the lower part of the Panhandle of West Virginia to Pittsburgh. This is an established manufacturing district, but it is also attracting a number of new firms.

Coal Attracts Chemicals

The coal fields at each end of the Ohio valley, particularly the one in southern West Virginia and eastern Kentucky, supply large quantities of high-quality coking and steam coal. The manufacture of coke from a portion of the coal results in such by-products as gas, tar, and light oils, which have attracted the manufacture of chemicals. The Ohio valley contains reserves of metallurgical, steam, and other types of coal which geologists have estimated will last 1,000 years at the present rate of use.

Riverborne coal which, in 1957, could be delivered at riverbank from West Virginia and Kentucky mines at \$1.25 to \$1.40 a ton less than railborne coal, makes it possible for thermo-electric plants in the Ohio valley to compete with the hydroelectric energy of TVA. Four thermo-electric plants, one by TVA and three by private companies, have been built to supply power to three installations of the Atomic Energy Commission. These atomic plants, with the one at Oak Ridge, Tennessee, use about 10% of the total electrical energy consumed in the United States.

Two of the world's largest thermo-electric plants, each built by a combine of private utilities, are at Madison, Indiana, and Cheshire, Ohio, respectively. They were built to supply energy to the gaseous diffusion plant of the Atomic Energy Commission at Piketon, near Portsmouth, Ohio. The plants have a combined capacity of 2,200,000 kilowatts, with an annual coal consumption of 8 million tons, all of it transported by river.

The barge companies and coal operators supplying these two plants are spending an estimated \$44 million on transportation to open new, and expand old, coal fields. The American Commercial Barge Line Company has a 15-year contract beginning in 1956 to deliver four million tons of coal annually to the plant at Madison, and it is to supply the plant at Piketon under an escalator clause relating to freight rates. Late in 1954 the Ohio River Company began deliveries to the Cheshire plant under a 15-year contract calling for 3,100,000 tons a year.

A third plant, that of Electric Energy, Inc., at Joffa, Illinois, will supply 37½% of the energy requirement of the plant of the Atomic Energy Commission at Paducah, Kentucky. The Joffa plant and the TVA steam plant at Paducah receive coal by both barge and rail. The cheapness by barge and the smaller unloading space required by barges favor that method.

Generating Capacity Rises

In 1941 there were only eight thermo-electric plants along the Ohio; in 1955 there were 21 with a total capacity of 8.9 million kilowatts. From 1941 to 1956 the generating capacity of the Ohio valley increased 450%, compared with 170% for the remainder of the nation. Cost of such thermo-electric power is one-third less than for the rest of the United States, owing to abundant coal, cheap subsidized water transportation,



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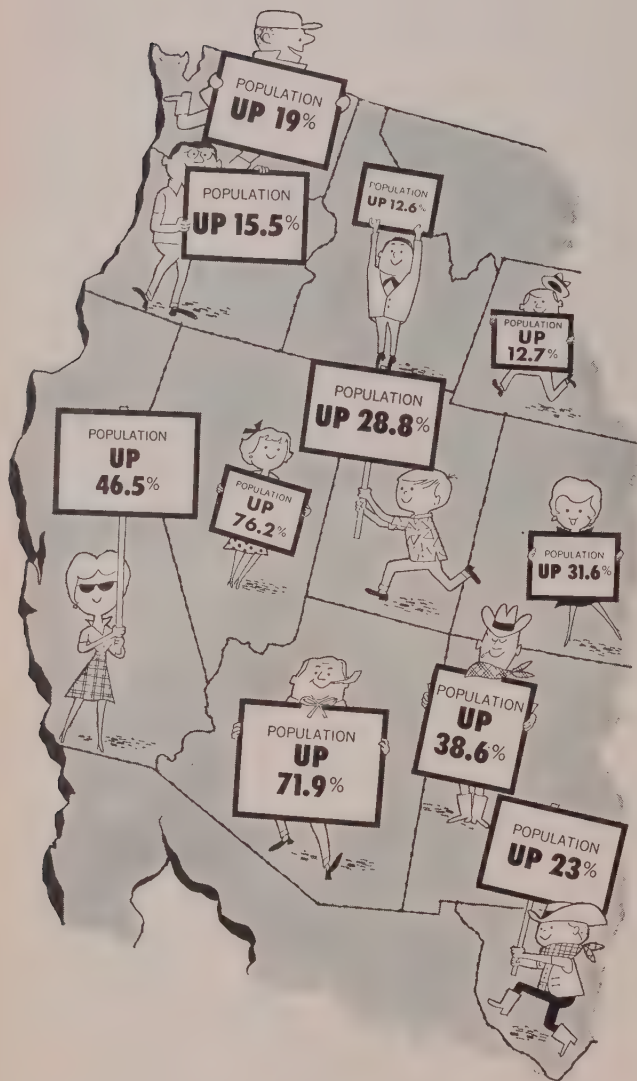


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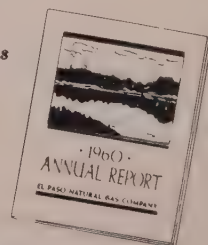
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and plentiful condensing water. In 1939 power stations on the Ohio produced 6% of the national output of electricity, in 1958, 12%. The average cost for Ohio River stations in 1958 was two mills per kilowatt-hour, compared with an average national cost of three mills for steam-generated electricity.

In 1958, three-tenths of a cent per ton-mile was a representative barge rate for coal; for some shipments the rate was as high as four-tenths of a cent. The rail rate for coal was 1.1 cents per ton-mile. From eastern Ohio mines to Cincinnati the rail rate was \$3.86 per ton, compared with \$1.42 by barge. In 1957 the cost of coal at generating stations on the Ohio averaged \$4.63 a ton, compared with a national average of \$6.64.

THE OHIO RIVER

The Ohio River extends 981 miles from Pittsburgh to the Mississippi, and has almost 1,900 miles of navigable tributaries. The Ohio and the most important sections of the tributaries have a minimum nine-foot channel. The remaining navigable portions of the tributaries have depths ranging from 4½ to 6 feet. The canalization (completed in 1929) of the Ohio has had an important place in the growth of traffic because it made possible year-round operations in both directions and the use of larger and more efficient equipment. Before the nine-foot channel was provided only downstream traffic was important and that only at times when the water was high.

In 1955 a billion dollar improvement program, to be completed by 1980, was begun on the Ohio. This program calls for 21 new dams of the high-lift, fixed type in place of the 46 existing wicket-type dams, only four of which are fixed. Work is progressing on three of the new dams and on modernizing the lock at Louisville. The locks at all the new dams will be 1,200 feet in length, compared with 600 feet for the existing locks. The smaller number of dams and longer locks will reduce lockage time. Owing to the fact that many tows range from 800 to 1,200 feet in length, commerce is impeded by the 600-foot locks. To navigate the locks such tows must be broken into two or sometimes three sections, with much time being lost, compared with a single lockage for a tow. The proposed improvements, it has been estimated, will quadruple the traffic capacity of the Ohio and will reduce transportation costs as much as 50%.

Advantages of River Transportation

In spite of any shortcomings it may have, the canalized Ohio has attracted firms interested in reducing their transportation expenses in ever-increasing numbers. Some firms use only water transportation but the central market location of the Ohio enables many producers to combine water and overland transportation economically. The central market position minimizes overland distances, and, hence, overland freight charges. The Dow Chemical Company, for example, hauls chemicals in bulk from Texas to Cincinnati where the cargoes are broken up and shipped by rail in tank cars over a

sales territory covering the northeast quarter of the nation.

The Kaiser firm, in selecting Ravenswood as the site for an aluminum plant, emphasized the advantages of water transportation. This plant concentrates bauxite, obtained from Jamaica, at a waterside plant in Louisiana and then ships the concentrate to Ravenswood for refining in which process enough power is purchased from the Ohio Power Company to supply all the needs of Chicago for power. Power costs are higher here than at Kaiser's Pacific coast plant (in 1957 they were twice those generated by hydro-electric power costs on the west coast), but the more central location, with respect to markets and the savings by using water transportation, will more than offset the higher power costs. Manufacture on the west coast requires that the raw material be shipped there overland and the most of the finished aluminum be returned to the market in the east.

Like Kaiser, the Olin Revere Metals Corporation plans to use river transportation for the major share of its bauxite, although the Pennsylvania Railroad has built a \$4 million extension to this plant over which bauxite will be brought from Baltimore at competitive rates. Power for this company is to be supplied by a coal carbonization plant located across the river at Cresap Bottom, West Virginia, upstream a few miles from Clarington, Ohio.

When the modernization of the Kanawha River was completed in 1938 the Allied Chemical and Dye Corporation, a producer of coke, coal tar, ammonia, and several other by-products, in factories at Ashland, Kentucky, and Ironton, Ohio, altered its operations so as to use barge transportation. The Ashland plant uses large quantities of coal which was obtained formerly by rail from the interior of Kentucky. Now coal is brought by barge from Harewood, West Virginia. The coal is loaded directly into barges of the company's own river fleet at the mine. In 1959 this company had 45 plants located on waterways and was constructing two more. The firm's controller stated that in the manufacture of heavy chemicals the primary advantage of a waterside location was the low transportation cost resulting from moving both incoming raw materials and outgoing finished products in large bulk shipments by barge.

Steel Travels by Water

The Jones and Laughlin Steel Corporation pioneered in shipping steel to southern ports by water, in order to cut freight expenses. The development and expansion of this firm have been based largely on the use of waterways for marketing its products. It also obtains coal by river. The tonnage at the port of Aliquippa-Rochester is largely due to the operations of this company.

A former traffic manager for the General Electric Company stated that his company selected Louisville as the location for a large appliance factory because of the availability of water transportation for the large amounts of steel it would need. The difference between the water rate and the rail rate on steel was so great that there was no alternative but to select a river point.

Other steel firms recently making extensive investments in modernizing and expanding Ohio River plants are the Detroit Steel Corporation at Portsmouth, the Wheeling Steel Corporation at several points in Ohio across the river from Wheeling, the Weirton Steel Corporation at Weirton, Armco at Ashland, and numerous smaller producers of specialized steel products. There is a concentration in the Portsmouth-Ashland area where West Virginia coal meets iron ore brought in by rail cars returning from taking ex-river coal to lake ports.

In 1957 minimum rates per ton of steel from Pittsburgh to St. Louis were: waterway, \$4.96; railway, \$16.00; highway, \$16.00, for a minimum of one million pounds by water, 40,000 pounds by rail, and 32,000 pounds by truck. These rates did not include the federal transportation tax nor transferral or unloading charges. At the same time the charges from Pittsburgh to Houston, Texas, were \$9.10 (10¢ handling charge) a ton by barge and the lowest rail rate was \$22.00 a ton. The barge trip to Houston required from 2½ to 3 weeks, however, and the rail trip only a week. In 1955 finished steel moved by water from Pittsburgh to Cincinnati at \$1.70 a ton, compared with a rail rate of \$7.00 a ton.

A growing practice in the steel industry is delivery by rail or truck from centrally-located mill warehouses at such water sites as Memphis, New Orleans, and Houston. In this way delivery can be made in smaller lots to buyers who cannot take delivery in barge-load quantities.

'Poor Man's Pipeline'

For transporting the products of the petroleum industry, the inland waterway has been called the poor man's pipeline. The investment for a given amount of work is less than in a pipeline and a further advantage is the flexibility in operations because the barge is not confined to any particular route or terminal. Capital costs are high for all pipelines, and represent a fixed, non-mobile investment. Yet, where volume is great enough to support a pipeline of large diameter, the rate by pipeline is lower than by barge. Even the pipeline of usual diameter offers keen competition to the barge. The flexibility in barge operations, however, sometimes offsets the cost disadvantage because it permits the shipper to take advantage of unusual supply or demand conditions or to adjust operations better to supply and demand conditions. This is especially true where volumes for shipment are too low to warrant investment in a pipeline. Because of these influences, pipelines hardly ever parallel a waterway.

The Ashland Oil and Refining Company pioneered in the use of rivers for transporting petroleum. The increase in the size of refining operations required a larger market area and an increasingly more distant search for supplies of crude oil, both of which caused the increased use of barge transportation. The firm hauls crude oil from the Gulf area at a cost of one cent a gallon, which is less than the cost of moving gasoline 10 miles from the refinery at Catlettsburg, Kentucky, to

Ashland on the Ohio River. The company owns a river fleet and also contracts with other barge lines to haul a portion of its products.

Many chemicals now move by barge, and special types of barges have been designed for particular products. An example of experimentation is provided by the Southern Alkali Corporation (subsidiary of Pittsburgh Plate Glass Corporation) which in the late 1940's installed steel tanks in a coal hopper for transporting chlorine. Over the ensuing three years the savings were so much on large shipments that the company had eight new barges designed especially for chlorine.

Now there are barges which carry chlorine and anhydrous ammonia under pressure of 250 pounds per square inch, and refrigerated barges which haul liquefied methane under temperatures as low as 258 degrees F. below zero degrees. Another special type carries molten sulfur at a temperature of 350 degrees F.

Barges as Time-Savers

Advantages of barge transportation for chemicals are savings in loading time, labor, wear and tear on equipment, and the amount of spoilage or waste and increased safety. A barge can be loaded with acid by a two-man crew in eight hours, whereas 22 hours are required to load the same quantity into railway tank cars. Increased safety results because the barges operate on a river at some distance from populated centers, except at terminals.

Barge transportation, because of the size of the operation, makes possible the economical long-distance movement of chemicals between plants when more than a single step is necessary for their manufacture. For example, the Union Carbide Chemicals Company, with two large plants on the Kanawha River, has a constant movement of intermediates between them and between the two on the one hand and plants at Whiting, Indiana, and on the Texas coast, on the other. Barge loads of chemicals are shipped to Texas City from either Charleston or Institute, West Virginia, and there are transferred to ocean tankers for delivery to a tank farm at Cartaret, New Jersey. To ship one of the company's products from Texas City to Institute cost (in 1958) 4½ times as much by rail as by barge, and on shipments in the opposite direction, owing to the reduced barge rates applying, cost by rail was ten times as much.

Minimum barge loads of 500 tons and river fleets capable of hauling 20,000 tons or more offer shippers flexibility and low freight rates for the longer hauls. A given plant thus can supply a larger market area, which encourages the growth of larger plants with whatever economies they may offer.

According to one authority, general barge rates have increased only half as much as rail rates since 1945. The modern barge operator quotes rates averaging about four-tenths of a cent per ton-mile, compared with an average rail rate of 1.4 cents per ton-mile. On the Ohio rates are from 40 to 50 per cent below the corresponding rail rates.

Another student of waterway transportation stated,

in 1956, that costs on the Ohio ranged from three-tenths of a cent to nine-tenths of a cent per ton mile, with five-tenths of a cent being about average for all freight operations. The specific costs depend on (1) the products hauled, (2) the length of haul, and (3) the direction of movement, whether up- or down-stream. Evidently, this observer was referring to the cost to the carrier for supplying the service, and not to the rate paid by the shipper.

Owing to terminal and switching charges, the economy of the barge gradually disappears when the highway or the railroad must be used to complete a haul. The economic limit for many commodities moving barge-truck or barge-rail is about 100 miles from the river port, and this limit is based on a minimum water haul of 600 miles. When competing carriers adjust their rates to barge competition, then the overall rate may result in the combined haul being uneconomical; i.e., there may be a disadvantage ratewise in the haul by water. In such cases there is also the time in transit to consider.

The abundant water supply of the Ohio results primarily from two factors: (1) the control of river flow by means of dams on the Ohio and reservoirs on its tributaries; and (2) the control of water pollution. The latter factor does not affect the amount of water but does affect its availability for use. An additional supply of water is contained in buried glacial deposits which range from 60 to 100 feet in thickness. This source is particularly important in the Ohio and Scioto river valleys in the Portsmouth area. Some factories take water from the Ohio, others from wells drilled into the glacial materials. Water from the Ohio must be treated before it can be used; the glacial materials serve as a natural filter.

TECHNOLOGICAL DEVELOPMENTS

Technological developments have been an important factor in the progress of river navigation for the past two decades. These developments or improvements fall into three classes: (1) more powerful diesel-powered towboats and larger barges and improved design in both towboat and barge; (2) improved harbor and terminal facilities; and (3) navigation devices or aids such as radar, electronic depth finders, ship to ship and ship to shore radiophone, modern communications systems on tows, and others.

Improvements in the river channel and in the locks and dams are also of a technological nature. Such improvements are fundamental because the transportation equipment must be adjusted to the way or route. As the way improves, more efficient types of equipment can be operated economically.

Further discussion of these matters is beyond the scope of this study.

CONCLUSIONS

Our inland waterways apparently have found their niche in the nation's transportation scheme by special-

izing on transporting cheap bulk products on a mass scale. Under such conditions the waterway seems to be the more economical and fit agency. In view of the (1) tendency for rail rates to increase with growing industrialization; (2) billion dollar improvement program just starting on the Ohio; (3) current and prospective technological improvements in river and terminal equipment; (4) keen competition among business men for markets; and (5) other advantages than cheap transportation, which the Ohio valley can offer as an attraction for manufacturing industries, the Ohio valley can be expected to continue expanding its manufacturing output, and the Ohio River, as a result, to have a growing volume of freight traffic.

Subsidized water transportation is an important economic problem that is receiving increasing public attention. There seems to be a growing movement in favor of assessing tolls on inland waterway traffic. On the other hand, such a policy is not in accordance with our laws and traditions concerning the use of waterways. Furthermore, both private industry and the federal government have invested enormous sums in new manufacturing facilities in the Ohio valley, and the water carriers have increased their investments in order to meet the demands made for transportation by the manufacturing industries. Important vested interests have therefore been created. In view of the enormous concentration of industry along a toll-free waterway, there might be undesirable effects if a toll were introduced. It is to be assumed also that the government wishes its activities in the area to be conducted at as low a cost as is possible. These influences may make the establishing of tolls difficult.

(Editor's note: Professor Landon, in his most interesting article, does not include the important consideration that all capital and maintenance costs of inland waterway improvements are absorbed by the taxpayer, and that all users of barge transportation which, in the main include the most prosperous segment of our national economy, fail to pay any user costs whatever to absorb such capital and maintenance costs. Nor does Professor Landon emphasize (1) that power costs also are partially absorbed by the taxpayer, and (2) that conversely, to their credit, pipelines operate at a profit, pay all capital and maintenance costs and contribute, as should other transportation media, substantial tax payment wherewith to pay their pro rata share of the cost of Federal, State and Municipal costs.

There is grave question whether such national policy—i.e. of subsidizing waterways and electric power generation—is sound. Not only are other major industries adversely affected (the wholesale shifts of industry to areas so subsidized result in social costs, in the areas abandoned, far greater than those obtained by a limited few from the subsidization itself) but through such unsound policies the country runs the risk of accelerating the trend towards further socialization and its attendant lower standard of living for all citizens.

Additionally, should our shortsighted transportation policies—the result of which are so ably presented by Professor Landon—force the railroads into nationalization, the net cost to society would far outweigh the benefits obtained by these selected few industrial giants, which as previously indicated, are well able to pay the true cost of water transportation which may well be twice that presently being charged.)

NATIONAL STEEL REPORTS on 1960 and the Future

In 1960, National Steel's operating and financial results ranked among the best in the industry. This was due partly to a stronger demand for the products in which we specialize than for most other steel products. But this record also reflects the improved efficiency in organization, operations and continuous modernization of plants and facilities.

We produced 5,751,000 ingot tons and shipped 4,342,000 tons of finished steel with sales amounting to \$697,063,036. Although there were two advances in employment costs, there were no increases in prices of National Steel products.

Excellent progress was made on our major construction program launched in 1959, and all plants and facilities will be completed this year. An important addition was made to the program in 1960—a two-furnace basic oxygen furnace shop at Great Lakes Steel Corporation.

At our new Midwest Steel plant in the Chicago area, the first major facility, the continuous galvanizing line, has been placed in operation. Facilities for the production of tin plate and hot and cold rolled sheets will be placed in operation in the near future.

At Great Lakes Steel Corporation in Detroit, work on the computer-controlled 80-inch Mill of the Future is well advanced and trial operations are scheduled for next August.

At Weirton Steel Company in Weirton, West Virginia, a second continuous annealing line was installed, oxygen producing capacity doubled, and other improvements in facilities were made.

At Stran-Steel Corporation's plant in Terre Haute, Indiana, a 600-foot color coating and finishing line for steel building panels was among the new facilities installed.

FINANCIAL. Since the start of the construction program in 1959, construction costs amounted to \$193,000,000 up to the close of 1960. The balance of the program, amounting to \$152,000,000, will be completed in 1961 and 1962. Financing in the amount of \$160,000,000 in bonds and term bank loans was arranged at the outset of the program and this amount, plus funds which have been and will be generated within the business this year and next, appears adequate to complete the program.

NEW PRODUCTS developed during the year included *Weirlite®*—our new lightweight tin plate which affords new production economies and is meeting with enthusiastic acceptance by customers.

RESEARCH scored important new advances particularly in the improvement of efficiency in blast furnace production.

1960 — AND THE FUTURE. In reviewing 1960, National Steel's top management team says: "Our relatively good showing during the year just past and the excellent progress of our construction program are eloquent evidence of the effective high skills and capabilities of our entire organization . . . and justify our assurance of their continued accomplishments in the future."

Major executive changes. Although these were made subsequent to the close of 1960, they are cited here because of their great importance to the future of National Steel Corporation. Thomas E. Millsop has moved to Chairman of the Board of Directors and Chief Executive Officer of the Corporation. George M. Humphrey resigned as Chairman of the Board of Directors but continues as a member and Chairman of the Executive Committee. Paul H. Carnahan, who was Chairman of the Board of Directors of Great Lakes Steel Corporation, was elected President of National Steel Corporation.

1960: A SUMMARY

	1960	1959
Net sales	\$697,063,036	\$736,978,650
Net earnings	\$ 41,937,235	\$ 54,897,360
Net earnings per share	\$5.53	\$7.28
Depreciation, depletion and amortization	\$ 41,149,055	\$ 36,487,856
Total dividends paid	\$ 22,680,299	\$ 22,522,643

We will be glad to send you a copy of our 1960 Annual Report on request.



NATIONAL STEEL CORPORATION, PITTSBURGH, PA.

SUBSIDIARIES AND DIVISIONS:
GREAT LAKES STEEL • WEIRTON STEEL • MIDWEST STEEL • STRAN-STEEL • ENAMELSTRIP • HANNA FURNACE • NATIONAL STEEL PRODUCTS

BULL MARKET . . . 1957 - 196 ?

(Continued from page 3)

course. However, proper classification, integrated with analysis of leading business indicators and a realistic concept of "normal value," may provide a basis for sound long-range investment planning.

In the Table, all bull markets since 1893 have been

tors not known now but there is convincing evidence that we are witnessing a typical second-stage bull market trend.

Those who need more statistical support for the proposition that the Dow-Jones Industrials could reach

DOW-JONES INDUSTRIALS — BULL MARKET STRUCTURE

Bear Market Low		First Peak		Interim Decline		Second Peak	
Date	Price	Date	Price	Date	Price	Date	Price(a)
July '93	43	Sept. '95	64	Aug. '96	42	Sept. '99	78
Nov. '03	42	Jan. '06	103	Nov. '07	53	Nov. '09	101
Dec. '14	53	Nov. '16	110	Dec. '17	66	Nov. '19	120
Oct. '23	86	Feb. '26	162	Apr. '26	136	Sept. '29	381
June '32	43	Feb. '34	111	Sept. '34	87	Mar. '37	194
Apr. '42	93	July '43	146	Nov. '43	130	May '46	213
June '49	162	Jan. '53	294	Sept. '53	255	Apr. '56	521
Oct. '57	420	Jan. '60	685	Oct. '60	566	X '64(?)	1,000(?)

(a) Present Dow-Jones Industrial average dates from Jan. 2, 1897, thus earlier price levels are not comparable but this would not significantly affect dating of major turning points.

classified by stages. Each bull market had two peaks separated by an interim decline. The second peaks were the terminal points of bull markets and, on average, were nine years apart. The second stage usually ran close to three years and typically doubled in price from the interim low point to the second peak. The present market fits into this historical market jig-saw puzzle if we date the bull market from October, 1957. The first peak was attained in Jan. 1960 at 685, followed by an interim decline to 566. In this light, the 1960 decline cannot be considered a separate bear market.

Subsequent market performance bears out this conclusion. We began the second stage in October, 1960 and should have two-three years of rising market prices if the past is a good guide to future patterns. The exact shape of the current second-stage advance will depend on numerous economic, political and international fac-

1,000 by 1964 may be interested in a new concept of "normal value" for stock prices. The writer's method assumes that prices are determined by a combination of residual (i.e. fixed) value and some multiple of earnings rather than by earnings alone.

Normal Value = Residual Value + (Multiple of Earnings) × Earnings

For the Dow-Jones Industrial average during 1926-1939, the multiple of earnings in the above equation was statistically determined as 9 and the residual value at 65, or:

DJI Normal Value = 65 + 9 × Earnings

Logic suggests that residual values should increase over the long run in a growing economy. We estimated residual values for later periods by noting that 65 represented the low point of the preceding bear market

(Continued on next page)

REGULAR QUARTERLY DIVIDEND

The Board of Directors has declared this day
COMMON STOCK DIVIDEND NO. 107
This is a regular quarterly dividend of

27½¢

PER SHARE

Payable on May 15, 1961
to holders of record at close
of business, Apr. 20, 1961

KARL SHAVER
SECRETARY
Apr. 6, 1961

**THE COLUMBIA
GAS SYSTEM, INC.**



38th Annual Report

Our Annual Report for 1960 was mailed March 15, 1961 to shareholders of record at the close of business March 1, 1961. Copies are available to others on written request.

Address:

R. A. YODER, Vice President-Finance

**DETROIT STEEL
CORPORATION**

Box 7508 M, Detroit 9, Michigan

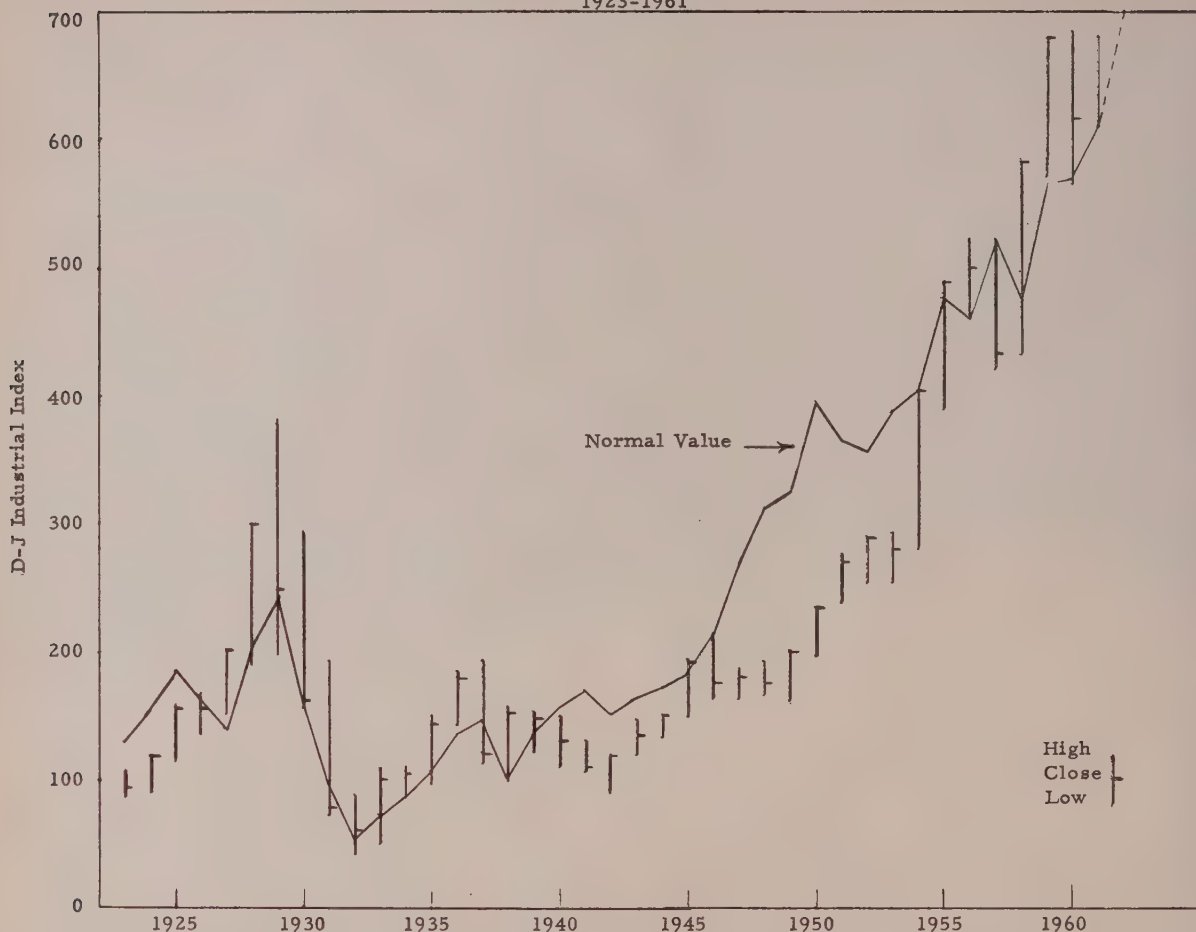


Notice to Security Holders of THE DAYTON POWER AND LIGHT COMPANY

Earning Statement for Twelve Months
Period Ended February 28, 1961

The Dayton Power and Light Company has made generally available to its security holders, in accordance with the provisions of Section 11 (a) of the Securities Act of 1933, as amended, an earning statement for the 12 months period ended February 28, 1961, which began after the effective date of the Company's Registration Statement, SEC File No. 2-16050, (effective February 15, 1960), relating to the \$25,000,000 5½% Series Bonds Due 1990 of the Company. On request, the Secretary of the Company will mail copies of such earning statement to security holders of the Company and other interested parties. The Dayton Power and Light Company
25 North Main Street
Dayton 1, Ohio
March 27, 1961

Dow-Jones Industrial Index
Yearly Price Range vs. "Normal Value"
1923-1961



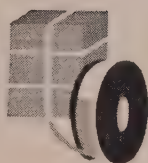
period, namely August, 1921. This suggests that investors may measure maximum downside market risk in a given period by noting the absolute low point reached during the last bear market. Accordingly, residual values at bull market peaks were derived from preceding bear market lows. For example, the 1937 residual value for the Dow-Jones Industrials was represented by the 1932 low of 42.84. Similarly, the 1946 residual value was 92.92, low point of the preceding bear market in April, 1942. We estimated residual values for interim years by interpolation. This approach provides indications of both long-term trend and investor psychology in one figure, namely residual value.

As seen in the chart, actual prices fluctuate around "normal value." Note the great undervaluation gap between 1947-1953! Some observers believe stock prices are too high because they have advanced over 300% since 1949 while earnings have increased by only 35%, but this reasoning is not valid without allowing for the undervaluation at that time. This gap was closed late in 1954 and since then prices have fluctuated around normal value. Interestingly, normal value for 1962 is

calculated at 715, a level which the market should discount some time in 1961. By 1964, normal value is calculated at 850, assuming earnings of \$48 a share in that year. Typically, the market overruns normal value by at least 20% at bull market peaks. Therefore, one should *not* be surprised if the Dow-Jones Industrial Average exceeds 1,000 by 1964. Referring again to the table of bull market structures, we can see how often the second stage has resulted in a doubling in price. In the current second stage, a doubling of the October, 1960 low of 566 would result in a level exceeding 1,100 DJI at the next peak.

From both statistical and historical points of view, the current market appears headed for substantially higher levels over the next three years. It is this conviction among sophisticated investors that has generated a strong market trend since October, 1960 and, in turn, has attracted wide public participation. If five-million share days are common in the early part of the second stage of this bull market, one need not have great imagination to visualize ten-million share daily trading activity two or three years hence.

50 years of news with American Viscose Corporation



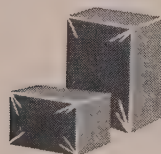
AVISTRAP® Cord Strapping* makes good. During 1960, American Viscose threw its weight behind AVISTRAP, a cord strapping of high tenacity Avisco rayon. Avistrap has no sharp edges, its light weight saves handling and shipping costs, and it gives the manufacturer many dollar savings. Sales of Avistrap have moved ahead significantly as an enthusiastic group of distributors has started selling the product.

*Patents pending.



AVICEL†* Microcrystalline Cellulose, a long-time development of our laboratories, became commercially available in 1960. Avicel is a form of cellulose that can be used in foods—contributing stability, body, bulk, texture and palatability. Various forms of it can be added to foods such as cheese, peanut butter, honey, dry mixes and convenience foods, puddings, custards, spreads, toppings. Avicel also shows great promise in pharmaceuticals and cosmetics.

†Trademark of American Viscose Corporation.
*Patent No. 2,978,446.



AVISCO "T" FILMS—There were two newcomers to the Avisco family of packaging films last year—called "T" films. These are a special combination of Avisco cellophane and polymers and have attracted wide attention because they virtually eliminate broken packages. The REO film for red meats, and the use of cellophane as an overwrap for egg freshness continue to make progress.

DIVERSIFICATION TAKES A NEW TURN

Toward the end of 1960, American Viscose Corporation entered into an agreement with Monsanto Chemical Company by terms of which American Viscose acquires a substantial interest in Monsanto in exchange for its Chemstrand holdings. Thus, American Viscose becomes widely diversified into the chemical field. AviSun Corporation, formed jointly with Sun Oil Company the previous year, began commercial production of Olefane* polypropylene film, developed new uses for its molding and extruding polymers.

*Trademark of AviSun Corporation.

NEWS IN FIBERS—1960 was a big year for Avisco fibers. Two new modified rayon fibers were introduced. Most significant was AVRIL®, a very strong and stable fiber which can be mercerized or preshrunk. Avril was welcomed for light weight fabrics in blouses, dresses, men's shirts, as well as for towels, draperies and other home furnishings.

American Viscose Corporation is celebrating its 50th anniversary. And this is a year when news and "what's new" are very much in evidence in the American Viscose Corporation. For example, new packaging films—"T" films, new fibers—Avril and Avlin, and completely new interests flowed from research to sales. Sales of Avisco cellophane exceeded those of record-setting 1959 in spite of stiff competition. Avisco rayon fibers made significant gains in industrial applications. New products of cellulose chemistry, of which Avicel (described below) is one, are expected to open up new opportunities for American Viscose beyond the markets for fabrics and fibers.

AVLIN® rayon has the singular ability to cling to itself and other fibers, imparts a crisp dry hand to fabrics and greater firmness and bulk than conventional rayons.

AVRON®, another modified Avisco rayon, appreciated for the high strength it contributes to fabrics when used alone or in blends, enjoyed increasing success in the women's wear and home furnishings fields. COTRON® fabrics, a blend of cotton and Avisco rayon, also progressed in blouses, dress fabrics, and men's wear applications.

PLANT IMPROVEMENTS—\$5.3 million was expended in 1960 to keep manufacturing facilities up to date, to improve process equipment and to reduce costs. Depreciation totaled \$15.5 million—about \$10 million more than was spent for plant and equipment. Expenditures for plant and equipment for 1961 are not expected to exceed \$5 million.



HIGHLIGHTS OF THE YEAR

	1960	1959
Sales and other income	\$206,700,000(a)	\$239,800,000(a)
Net Earnings	6,800,000(a)	15,200,000(a)
Per Share Common Stock		
Net Earnings	1.45(a)	2.98(a)
Dividends Paid	2.00	1.50

(a) Includes Chemstrand dividend amounting to \$2,500,000

AMERICAN VISCOSE CORPORATION

1617 Pennsylvania Boulevard,
Philadelphia, Pa.

Associated Companies (50% owned):
AviSun Corp.—Ketchikan Pulp Co.



LOOK TO **AVISCO®** FOR
FIBERS AND PACKAGING FILMS
NEW IDEAS



NASA chooses Western Union-engineered system for world-wide satellite tracking stations and computer center

Flexible network now speeds launching and tracking data, administrative messages and computations in seconds (and in writing) to NASA brain-center in U.S.A.

The world over, National Aeronautics and Space Administration Minitrack Stations remain operational around the clock. Their mission: to pick up satellite tracking intelligence and transmit it instantaneously to NASA's Goddard Space Flight Center in Maryland.

Now, every NASA Minitrack Station can transmit direct to the Maryland Center—or use this point as a relay for messages between individual stations. Equally important: Maryland can send launching and tracking intelligence simultaneously to NASA installations around the globe.

"Conference Circuits" are another unique feature of this system. With push-button ease and speed, Minitrack Stations on opposite sides of the world can now "talk" to each other in writing.

Every NASA message is automatically numbered before transmission. No chance of loss or error. And monitoring equipment assures continuous maintenance of all circuits.

Where fast, modern communications are needed to speed information without delay, without error, without fail . . . new Western Union systems are meeting the challenge.

More ways Western Union-engineered systems are bolstering National Defense

Comlognet (Combat Logistics Network). To be used to control the flow of men and materials between more than 240 Air Force installa-

tions. National operation of the world's most advanced data communications system scheduled during 1962.

Air Force Automatic Teleprinter System. New Western Union switching centers and terminal equipment are part of the 5½ million-mile network, linking over 350 Air Force installations around the world. Minimum daily capacity: 130 million words.

National Weather Facsimile Network. Now providing data to 600 stations in 330 cities, serving: U. S. Weather Bureau, Air Force, Army, Navy, Coast Guard, commercial airlines, other nonmilitary subscribers.

Coast-to-Coast Microwave Network. Designed for both military and civilian use. Will handle every known form of electronic communication. Now under construction.



Western Union . . . finds better ways to speed it electronically



LUNCHING IN THE HOUSE OF COMMONS. This photo is particularly significant in that it indicates how European Governments, as well as industrial firms, stock market exchanges, and other European institutions, graciously acknowledged our presence. Parliament was not in session; so obviously con-

siderable time and effort were expended to make us welcome guests. Mr. Robert Allan, Conservative M.P. from Paddington South, and a director of The Financial Times, was host. The luncheon was given by Chairman Lord Robbins and directors of The Financial Times and The Investors Chronicle.*

Financial Analysts' Second European Field Trip

by Edward S. Wilson*

President, The New York Society of Security Analysts

THOSE OF US who were fortunate enough to attend the Second European Business Conference Trip, sponsored by *The New York Society of Security Analysts* and *The National Federation of Financial Analysts Societies* were impressed primarily by four factors during our travels.

First and foremost was the uniform courtesy, consideration and warm hospitality of our hosts—the leading bankers and industrialists of Western Europe. Second, was the remarkable vitality and recuperative powers shown by these countries, which was particularly striking to one who, like the writer, remembers well the ravages of the last war. Third, we could not help but be impressed by the high degree of automation and efficiency of the variety of industrial plants seen on our trip and the general progressiveness in keeping abreast of new processes and techniques. Finally, we were pleased to note the frequently expressed gratitude of our hosts for the aid of the Marshall Plan in the re-

habilitation of their economies in the post-war period.

In a little over three weeks, 85 Analysts and 45 wives all visited the United Kingdom and France with one group also journeying to Denmark, Norway, West Germany and Belgium, and the other to Holland, West Germany, Austria, and Switzerland. Looking back on this trip soon after its conclusion, one is left with many kaleidoscopic impressions. Among these were: a fascinating journey through the courtly halls of Britain's Hampton Court on a rainy Easter Monday; the friendliness of the Amsterdam Analysts at a delightful cock-

*Other United Kingdom men who attended the luncheon were: Mr. Selwyn Lloyd, Chancellor of the Exchequer; Mr. F. R. Althaus, a deputy chairman of the Stock Exchange Council; Mr. Leon Bagrit (deputy chairman, Elliott Automation); Mr. M. R. Bridgeman (chairman, British Petroleum); Mr. T. G. Bradley (a director of Austin Motors); Mr. Edward du Cann, Conservative M.P. for Taunton (managing director of the Falcon Trust); Viscount Chandos (chairman, Associated Electrical Industries); Mr. M. Clark (a director of Plessey); Mr. Jack Cotton (chairman, City Centre Properties); Mr. F. D. Edwards (managing director, Edwards High Vacuum); Sir Nutcombe Hume (chairman, Charterhouse Investment Trust); Mr. R. J. Kirtton (a director and general manager of Equity and Law Life Assurance Society); Mr. J. F. Knight (a director of Unilever); Viscount Knollys (chairman, Vickers); Mr. H. M. O. Knox (a deputy chairman of the Stock Exchange Council); Sir Joseph Lockwood (chairman, Electric and Musical Industries); Sir Halford Reddish (chairman, Rugby Portland Cement); Mr. J. A. E. Reiss (chairman, Associated Portland Cement Manufacturers); Sir Henry Warner (Society of Investment Analysts); and Mr. G. Whitman (a director of S. G. Warburg).

* Manager, Research Department, W. E. Burnet & Co.

tail party in a hotel room overlooking the Amstel River; passing through the medieval town of Augsburg on our way to an interesting day with the managements of M. A. N. and Messerschmidt; the red carpet treatment given us by the Austrian Government in Vienna, still the glamorous city on the Danube celebrated by the Strausses and Franz Lehar; the beautiful natural panorama of mountains and lakes on the bus trip from Zurich to Lucerne for a luncheon with the three leading Swiss banks; and the grand finale of a reception in the Eiffel Tower overlooking the "city of light."

In between were both formal and informal talks at company meetings and plant trips, luncheons, dinners and more meetings with prominent industrialists, bankers and economists of nine countries. The subjects discussed included the *Common Market*, the *Outer Seven*, West Germany under Adenauer and France under de Gaulle, the labor shortages in Holland, West Germany and France, the resurgence of the German aircraft industry, nationalization of industry in Austria and the possibility of revaluation of the Swiss franc. Among our hosts we found intense interest in American policies and economics, and especially in our foreign policy.

The Financial Analysts in London, Amsterdam and Paris showed an enthusiasm and a pride of craftsmanship which offer a solid base of hope for an eventual International Federation. The London Society, under the vigorous and far-sighted leadership of Colonel W. Francis Andrews, president, has grown in membership

from 200 to 500 in the past two years. At a dinner in London, we had the opportunity of talking to many of the London Analysts on an individual basis and found several common points of interest, such as obtaining more complete and accurate information from corporate managements.

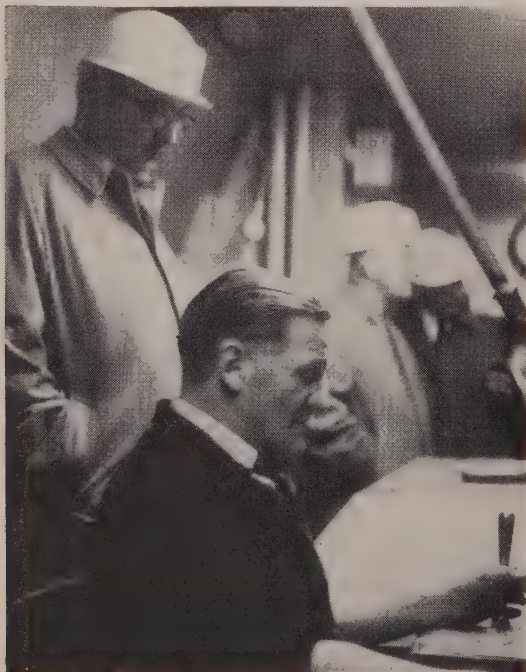
In Amsterdam, we were struck by the zest and probing curiosity of a group of 40 Analysts who are now forming a society which should make a substantial contribution to our profession in the years to come. In addition to the reception previously mentioned, the Amsterdam group entertained us at a most pleasant and informative luncheon. After a comprehensive talk on the nation's business picture by the economic adviser to the Netherlands government, this writer had the pleasure of outlining the formation, history and progress of The New York Society and The National Federation. In Paris, several officers of the New York Society were entertained at a reception by the officers and directors of the French Society. The Paris society's entire membership of about 40 is derived from the banks, as none of the brokerage firms employ Security Analysts.

In Munich, Vienna and Zurich, we were entertained by the leading banks; and, in addition, we visited the stock exchanges in London, Amsterdam, Munich, Vienna and Zurich. In Amsterdam, the chairman of the stock exchange gave us a most comprehensive and fact-filled talk on the history and operations of his exchange, which he rightly termed the "cradle of present-day stock dealing" with trading of shares starting in the early 17th century.

The Dresdner Bank sponsored a reception in Munich with Ernst Matthiensen, a generous host on our 1959 trip, coming from Frankfurt. The Deutsche Bank held a sumptuous dinner, which was attended by the leading officers from the main office in Frankfurt. After an *al fresco* party, featured by a delicious combination of orange juice and champagne, the Munich Stock Exchange was our host at a luncheon. In Vienna, we had a morning meeting with officers and economists of the Laenderbank and an afternoon meeting with officers of the Creditanstalt. In between these meetings there was a luncheon in the beautiful Pallavicini Palace with the officers of the Vienna Stock Exchange.

The three leading banks in Zurich, the Credit Suisse, the Swiss Bank and the Union Bank of Switzerland, gave us a full, interesting and most enlightening day. In the morning, there was a talk by the economist of the Swiss National Bank, individual meetings at the offices of the three banks and a visit to the Stock Exchange. Then came the *piece de resistance*, a trip with our wives to Lucerne for a fine luncheon sponsored by the three banks. These meetings and luncheons afforded us a unique opportunity to learn about the economies of the countries involved.

It should also be mentioned that in London *The Financial Times* and *The Investors Chronicle* were our hosts at luncheon in the dining room of the House of Commons attended by many British financial leaders. In this room we felt the presence of the historic prime



Edward S. Wilson, president of The New York Society of Security Analysts, in hard helmet, is shown watching a United Steel Companies' plant operator "turn over" hot billets of steel from a control tower above a rolling slab at Sheffield, England. The blinding reflection from hot molten steel was the most vivid light here.

ministers from the elder Pitt to Disraeli, Gladstone and Churchill.

A unique and interesting field trip was made to Massey-Ferguson's brand new farm equipment plant in Beauvais, France, practically under the shadow of the famed cathedral. This plant, the most modern and highly automated in western Europe, should give the company a marked competitive advantage in the years to come. At the same time, our wives visited the Beauvais cathedral and Gerberoy, a quaint medieval village nearby, with its narrow, cobble stone streets. Both groups enjoyed traditional French provincial hospitality at luncheon.

Another very worthwhile field trip was made from Amsterdam to Rotterdam and the main offices of Unilever. In the company's magnificent directors' room (overlooking the entire city) the top managements of both the Dutch and English companies discussed in detail earnings, operations and finances of this far-flung world enterprise. A delicious buffet luncheon followed this management conference.

In our conversations with industrial managements throughout the United Kingdom and Western Europe, we were struck by the tremendous improvement made in annual reporting in recent years. Most corporate annual reports now include full comment on operations, earnings and financial position and a considerable amount of statistical data not previously presented.

However, it cannot be denied that there remain two basic difficulties for American Analysts in attempting to analyze British and Western European securities. The first difficulty is that, with one or two notable exceptions, these corporations do not issue quarterly reports of sales and net income nor are their managements conditioned to discuss current operations or make future estimates. The second is that the system of accounting tends to greatly understate earnings by the setting up of contingency reserves so that arrival at a determination of true earning power is well nigh an impossible task. Despite these problems, we are certainly benefiting from the mutual interchange of information, and progress is being made slowly and surely towards a better understanding of European industries and European securities.

This article cannot be concluded without a word of heartfelt appreciation for the continuing and conscientious work of the Co-Chairmen of our second European field trip, Monte Gordon and Alan C. Poole. These two gentlemen started their labors a year before the trip and devoted many weeks to arranging the myriad details which made the trip a smooth-running success. Finally, on the trip itself, they were busy from morning to night keeping the program on schedule and overseeing the field trips and management conferences. The National Federation and the New York Society owe them a deep debt of gratitude.

European Trip Manifest

Trip A

The following Financial Analysts and wives visited Copenhagen, Stockholm, Dusseldorf and Brussels. Both groups met in Paris.

Douglas R. Annett
Annett & Co., Ltd.
220 Bay St.
Toronto 1, Ontario.

Mr. & Mrs. Philip Bauer
Investment Analyst
Rockefeller Brothers, Inc.
30 Rockefeller Plaza
New York 20, N. Y.

Mr. & Mrs. Nathan Belfer
Investment Analyst
de Vegh & Co.
26 Broadway
New York 4, N. Y.

Mr. & Mrs. Cameron Biewend
Investment Analyst
Ogunquit, Maine.

John F. Bohmfalk, Jr., Vice President
McDonnell & Co., Inc.
120 Broadway
New York 5, N. Y.

Robert H. Brimberg, Partner
Brimberg & Co.
26 Broadway
New York 5, N. Y.

Mr. & Mrs. James A. Close
Senior Vice President
Merchants Natl. Bank & Trust Co.
216 So. Warren Street
Syracuse 2, N. Y.

Mr. & Mrs. O. Karl H. Dieckmann
Investment Analyst
Hydraulic Power Systems, Inc.
261 East Nine Mile Road
Ferndale 20, Mich.

Wallace F. Doerr, Vice President
Craig-Hallum, Inc.
133 S. 7th Street
Minneapolis 2, Minn.

Robert T. Edmundson
Partner
H. C. Wainwright & Co.
120 Broadway
New York 5, N. Y.

Mr. & Mrs. Neil C. Estabrook
Assistant Cashier
Merchants Natl. Bank & Trust Co.
11 So. Meridan Street
Indianapolis 9, Ind.

Theodore H. Fuger
Heber-Fuger-Wendin, Inc.
600 Penobscot Bldg.
Detroit 26, Mich.

Mr. & Mrs. Monte J. Gordon
Director of Research
Co-Chairman of European Trip
Bache & Co.
36 Wall Street
New York 5, N. Y.

Miss Frances Haidt
Investment Analyst
Herzig, Farber, McKenna
50 Broadway
New York 4, N. Y.

Mr. & Mrs. Phillip Hettleman
Partner
Hettleman & Co.
One Wall Street
New York 5, N. Y.

Mr. & Mrs. Thomas Johnson
Vice President
Eaton & Howard, Inc.
24 Federal Street
Boston 10, Mass.

Miss Mildred Sorentino
Lubetkin, Regan & Kennedy
44 Wall Street
New York 5, N. Y.

Sander Landfield, Partner
Carlisle & Jacquelin
Two Broadway
New York 4, N. Y.

Mr. & Mrs. Kuno Laren
Director, Research
Jesup & Lamont
26 Broadway
New York 4, N. Y.

(continued on page 97)

OUR 116TH YEAR OF PROGRESS

serving the world in...

RECREATION

Brunswick Corporation is serving the field of recreation through these divisions: Bowling; MacGregor Sport Products; Owens Yacht; Brunswick Boats; Red Head; and Brunswick Sports Products.

HEALTH

Brunswick is helping to meet world health needs through its Aloe Division, manufacturers and distributors of equipment and supplies for physicians, hospitals, and scientific laboratories.

EDUCATION

Brunswick's School Equipment Division has pioneered new design concepts in classroom furniture and gymnasium equipment to keep pace with the nation's expanding educational requirements.

DEFENSE

Serving national security, Brunswick's Defense Products Division designs, develops, and manufactures metal and plastic component parts for guided missiles and space craft.

Here's the record of our progress!

	1960	1959	1958	1957
Net Sales	\$359,861,000	\$294,799,000	\$237,478,000	\$166,750,000
Earnings (before taxes)	\$ 79,160,000	\$ 58,153,000	\$ 33,723,000	\$ 17,704,000
Net Earnings (after taxes)	\$ 37,995,000	\$ 27,910,000	\$ 15,308,000	\$ 8,157,000
Total Assets	\$530,375,000	\$360,965,000	\$235,487,000	\$129,549,000
Working Capital	\$148,868,000	\$ 90,365,000	\$ 66,492,000	\$ 40,143,000
Shareholders' Equity	\$141,912,000	\$104,962,000	\$ 59,155,000	\$ 35,936,000
Number of Shareholders	38,942	18,258	7,050	3,938
Dividend Record—Common:				
Cash	\$ 5,296,000	\$ 3,802,000	\$ 1,857,000	\$ 881,000
Stock	—	—	—	5%
Stock Splits	2 FOR 1	3 for 1	4 for 3	2 for 1

Data for companies acquired on a pooling-of-interests basis (Aloe, Owens and Larson) have been included for all periods. Data for all other acquired companies have been included only from the respective dates of acquisition.

All figures on a consolidated basis

If you wish to have a copy of Brunswick's annual report, write to:

Arthur R. Cahill
Vice President—Finance
Brunswick Corporation
Dept. B4 623 South Wabash Avenue
Chicago 5, Illinois



Brunswick

CORPORATION

Shareholders...

An Important Announcement



The annual shareholders' meeting will convene at Chicago's McCormick Place auditorium on Monday, April 17th, 10:00 a.m.

Owens and Brunswick boats and exhibits of other Brunswick products will be on display in outer lobby, McCormick Place theater.

B. E. Penninger

President



Socio-Political Effects on the Economies Of Six Western European Countries

by Alan C. Poole*
European Trip Co-Chairman

THE GREATEST NEED TODAY for the economic well-being of each country visited on our recent tour of Western Europe might be set forth as follows:

United Kingdom—Liquidity
The Netherlands—Natural
Resources
West Germany—Labor
Austria—Capital
Switzerland—Less outside speculation in the Swiss Franc
France—Political stability

The long-term economic outlook for all these countries is relatively favorable, although their rate of potential growth in the future might vary considerably. Consideration should be given to such political and social forces presently influencing their economies as well as future situations which might develop. Obviously this subject is so complex that complete coverage would require several books; but it is the writer's hope that by touching lightly on each area he might offer some clues as to existing conditions as well as exposing future obstacles or enhancements that could be important influences in the future economic growth of the countries covered in this article.

The United Kingdom

In many respects the economic pattern of the United Kingdom has followed rather closely our own. A business recession started somewhat earlier than ours and continued throughout 1960, but there is now evidence of a full-scale business recovery. One of Great Britain's lead-

ing economists, however, is rather cautious in his forecasts for the intermediate term prompted by the existence of an unfavorable balance of trade and lack of liquidity in the United Kingdom. These two conditions at present pose the greatest threat to the British economy, the second having been caused basically by the first. Several factors have contributed to this trend toward an increasingly unfavorable balance of trade. Probably the decline in invisible exports, that is, services such as shipping, insurance, etc., might be considered as having the greatest influence for these services have been important contributors to the United Kingdom's intake of money in the past. In recent months gains in gold supply have been reversed into losses contrary to the United States where the outflow of gold, rather extreme over the past year, seems to be arrested at least temporarily.

So far as the London stock market is concerned it has been rising continually and there are fewer good values in equities available today. The reasons cited are similar to those used to explain the comparable action of the American market—lots of cash available for investment and a great demand for equities with an inadequate supply of shares.

The fact that a conservative administration has been strongly entrenched is most encouraging for the future growth of the British economy as industry can now continue to expand without fear of nationalization. The Socialistic experiment proved to be a failure, and although

some reforms have been instituted, such as socialized medicine and nationalization of transportation (steps which may eventually take place in this country), many of the undesirable elements of socialism have been eliminated. We in this country might do well to learn and profit from studying the British socialistic experiment which failed.

Lack of liquidity in part has been created by the tighter monetary policy of the Conservative regime and unfortunately this has affected the balance of trade. Generally speaking, however, the Government's policies are popular with investors as witnessed by the recent rise in stock prices on the London Stock Exchange following the announcement of the Budget, as contrasted to the fall of stock prices in the United States following our Administration's tax program message.

If the United Kingdom were a part of the Common Market a more favorable balance of trade might be created; but because of its obligations to the Commonwealth and its reluctance to become involved politically Great Britain has taken a course that might be considered as only second best—that is, participation in the Outer Seven. Eventually these two groups may merge and there are some important people in Great Britain who not only feel such a merger would be beneficial but are pressing for its fruition.

The Netherlands

The loss of some of their overseas possessions has hampered the Dutch people, but they have made remarkable strides in overcoming this blow.

*Research Consultant, Hemphill, Noyes & Co.

Basically the Dutch are some of the shrewdest traders in the world and Holland has thrived on the brains of its people. The Netherlands, unlike the United Kingdom, has been able to maintain a favorable balance of trade primarily through invisible exports, especially shipping. Politically the present government might be considered Socialistic, but control has been exercised primarily for the benefit of industrial growth. Labor costs have been held well in check and when pressures were applied for higher wages the revaluation of the Guilder took place which offered workers increased purchasing power rather than creating inflationary pressures through higher labor costs that might disturb the balance of world trade.

Geographically handicapped, with a substantial part of the country lying below sea level, the Netherlands has found it necessary to develop a vast network of dikes and drainage systems to make the land usable. Even today a lot of undeveloped acreage is good for grazing purposes only. However, a vigorous land reclamation program is taking place which is likely to result in further industrial growth for this country accelerated by the rapidly increasing population.

So far as outside influences are concerned the Dutch economy is affected to some degree by them, but the recent business recessions in the United States and the United Kingdom have not had serious repercussions and the Dutch economists are quite optimistic for 1961.

To this writer the most impressive fact is that the Netherlands is financing itself through taxes and that the government debt has been decreasing, thus insuring a sound Guilder and keeping inflation at a minimum. Political stability of the government, coupled with the ingenuity of management of various large companies, has created a sound basis for continued economic growth. Investment in selected equities of Dutch companies, readily marketable through the Amsterdam Stock Exchange, offer above-average opportunities for capital appreciation for the long term.

West Germany

An acute labor shortage in West Germany still exists despite the continuous outflow of Germans from behind the Iron Curtain. A bottleneck has been created which has undoubtedly slowed up industrial expansion, and as a result the increasing power of trade unions is becoming the greatest threat to the West Germany economy. Labor costs are rising sharply and probably are the highest on the European continent today; but they are substantially lower than those in America where unemployment is now over 8% of the working force as compared to probably less than 3% in West Germany.

Politically, West Germany appears stable and should remain so even when Chancellor Adenauer retires. Although not much hope is held out for an eventual reunification of East and West Germany the belief remains that East Germany would vote overwhelmingly anti-Communist were a plebiscite permitted. Trade is conducted between

the two Zones, but greater economic strength could be eventually attained through unification.

The economy of West Germany has followed somewhat the pattern of the United States with a recovery currently underway which appears to be more buoyant than ours. Money has been plentiful to the point where many German stocks are selling at extraordinarily low yields. German accounting does not reveal net earnings as amounts beyond dividends paid out are hidden in reserves; but it is this writer's guess that many of the stocks of leading German corporations are selling at price times earnings ratios as high, or higher, than ours. German capital has been slow to invest in American securities while substantial sums of American money have gone into the German stock market creating a short supply of stocks and forcing prices up.

There has been some concern in Germany about the drain of gold reserves out of the United States with fears of ultimate devaluation of



Boarding Hoogovens' (former) luxury liner, outside of Amsterdam, which is permanently anchored in a canal adjacent to the steel mill. Hoogovens bought this ship to house approximately 600 laborers, 200 of whom were transported from Italy. Topside quarters are used to entertain guests. Analysts and management met in the mahogany-paneled "A" deck salon and later lunched on deck. Alan C. Poole, Trip Co-Chairman, is shown, with dark glasses, in foreground.



At the Massey-Ferguson Limited plant at Beauvais, outside of Paris. Shown left to right, are: R. A. Diez, general manager of Massey-Ferguson G.m.b.H. (West Germany); Jean Perichon, president-directeur general, Massey-Ferguson, S.A. (France); Leo J. Larkin, Carl M. Loeb, Rhoades & Co.; Guy Prenouveau, comptroller of Massey-Ferguson S.A.; and Albert A. Thornbrough, president of Massey-Ferguson Limited. The Beauvais plant manufactures tractors.

the dollar. With no great need for further American capital at the present time, the Germans have revalued the Deutschemark, not an especially popular step with either industry or the banks because of a possibility of the creation of an unfavorable balance of trade. German labor costs presently pose a threat in this direction. More popular, generally, the writer would guess, are the steps the German government is taking to aid the gold problem of the United States through plans to pay off part of their debt as well as to contribute a greater share to the aid program for underdeveloped countries. The extent to which West Germany's balance of trade will be affected remains uncertain, and until this can be determined it is difficult to forecast the future economic outlook.

Austria

The recovery of the Austrian economy following World War II was seriously impaired until 1955 when the Russian occupation was terminated. This year the Austrian government completed an expensive reparations payment program to the Soviet Union while the prescribed oil shipments must be continued until 1965. Before the Russians left the country, they stripped most of

the privately owned companies of their machinery.

The occupation of Austria by the Russians had several significant effects on the economy which must be understood in order to fully analyze it. In the first place, the postwar recovery really took place only after the Russians left Austria and therefore it is still in a relatively early stage; and several years should pass before a corrective recession in business can be expected.

Secondly, Austria necessarily became much more of a Socialistic state than otherwise would have been the case had not the Russian occupation taken place. It was the feeling of the Austrian government that companies could better be protected if they were nationalized because then the Russians would be less likely to take away the machinery and other equipment. This decision by the government proved to be correct. Substantially all the machinery and equipment taken out of the country by the Russians belonged to private industry. Forced replacement of this equipment necessitated modernization of production facilities to a degree where Austria's private industry may compete in world markets.

Aside from capital made available to Austria by various European aid

plans little has come from outside sources. American investors have had two major fears about investing in Austria. The first is the mistaken belief that Austria is a Socialistic state moving toward further nationalization because the Austrian government's motivation in nationalizing companies has been misunderstood. Although the government is made up primarily of Socialists there appears to be little likelihood of further nationalization of industry; in fact, pressure from some groups to denationalize is prevalent. Taxes have been high to meet the reparation payments, but it is conceivable these might eventually be lowered to attract badly needed capital. Another factor creating uncertainty for American investors is Austria's proximity to the Iron Curtain; and in some respects this is a valid fear. The heart of Austria's manufacturing facilities is located south of Vienna less than 50 miles from the Hungarian border. This writer believes there should be no more anxiety over Austria being reoccupied by Russia than there should be regarding West Berlin. It seems in either case to fulfill its obligations and maintain its prestige in Western Europe, the United States would be forced to intervene.

There are few investments available in Austria, although an active market in securities in leading privately-owned corporations is maintained on the Vienna Exchange. However, most of these corporations are closely held by Austrian families. The writer left Austria with the impression that if further equities were made available capital investment could prove quite interesting, but the government is primarily interested in raising capital through sale of government bonds at relatively high interest rates or through direct formation of new companies in Austria by American industry.

Switzerland

This country is probably as close to a Utopia as any that exists today. Because of its strategic geographical position and the resoluteness of the people, Switzerland has managed to

keep out of world conflagrations (although during World War II its neutrality was threatened on more than one occasion). At one time the country had 20% of the total population mobilized to prevent invasion.

As increasing interest has been developed in the Swiss economy it has been found necessary to build up an economic wall. Not once has this country suffered a serious business correction since the 1930's when the whole world was in a depression and Switzerland's export market was seriously affected as well. Since World War II its economy has run on a smooth plane. Furthermore the tax structure is probably more favorable here than in any other country in Western Europe.

The worst problem has been to prevent the inflow of foreign money. As the government desires to avoid speculation in the Swiss Franc it has taken rather drastic steps to keep foreign capital out of the country. Swiss securities may not be purchased other than by Swiss nationals. The few such securities that are available in other countries com-

mand a substantial premium over listed Swiss market prices. Foreign deposits in Swiss banks are discouraged and a small interest fee must be paid by anyone desiring to deposit money there.

To become a Swiss national is virtually impossible, although application can be made for citizenship after a residence of 10 years, but even then it is a long time before approval may be granted. This country has had virtually no change in government in over 100 years. Obviously Switzerland would be a desirable location for capital funds, but under present regulations it is virtually impossible to invest in any form in this country other than through forming and locating new companies or subsidiaries in Switzerland.

France

The recent uprising in Algeria interrupted what was probably the most stable period politically in France for a great many years. The Algerian outbreak though not entirely surprising or unexpected was somewhat more acute than could

have been foreseen. Many French leaders are hopeful that General De Gaulle will resolve the Algerian problem and following its settlement an era of political peace will come to France. At this writing General De Gaulle's appeal to the people of France appears to have achieved the termination of the current upheaval and strengthened his position immeasurably.

In recent years the French economy has been the most dynamic possible in the history of that nation. Industrial growth has been substantial and a great deal of effort has been expended in developing natural resources in southern France. For example, natural gas may be an important factor in the future growth of the French economy, while the steel companies have shown unusual resourcefulness not only in discovering but also utilizing a low-grade iron ore.

In many other areas French companies have shown great growth, and although their present method of reporting earnings make their stocks appear to be overpriced, some great revelations in the future

Newport News Shipbuilding and Dry Dock Company

Quarterly Statement of Billings, Estimated Unbilled Balance of Major Contracts and Number of Employees

	Three Fiscal Months Ended	
	March 27, 1961	March 28, 1960
Billings during the period from shipbuilding, ship conversions and repairs, hydraulic turbines and other work	\$ 41,454,855	\$ 38,206,455
Estimated balance of major contracts unbilled at the close of the period	At March 27, 1961 \$478,622,327	At March 28, 1960 \$300,975,906
Equivalent number of employees, on a 40-hour basis, working during the last week of the period	15,868	15,673

The Company reports income from long-term shipbuilding contracts on the percentage-of-completion basis; such income for any period will therefore vary from the billings on the contracts. Contract billings and estimated unbilled balances are subject to possible adjustments resulting from statutory and contractual provisions.

By Order of the Board of Directors
R. I. FLETCHER, Financial Vice President

April 26, 1961

might appear when they are required to reevaluate their reserves—a means they have used to hide both earnings and assets. In fact, it is believed by many investment bankers in France that stocks of these companies should appreciate substantially once these revaluations take place. There is no fixed schedule, but they could come before the end of 1961.

For the speculator willing to risk the existing hazards today in the French political situation, there may be great rewards because the stock market in France has been depressed considerably recently and some good values are available.

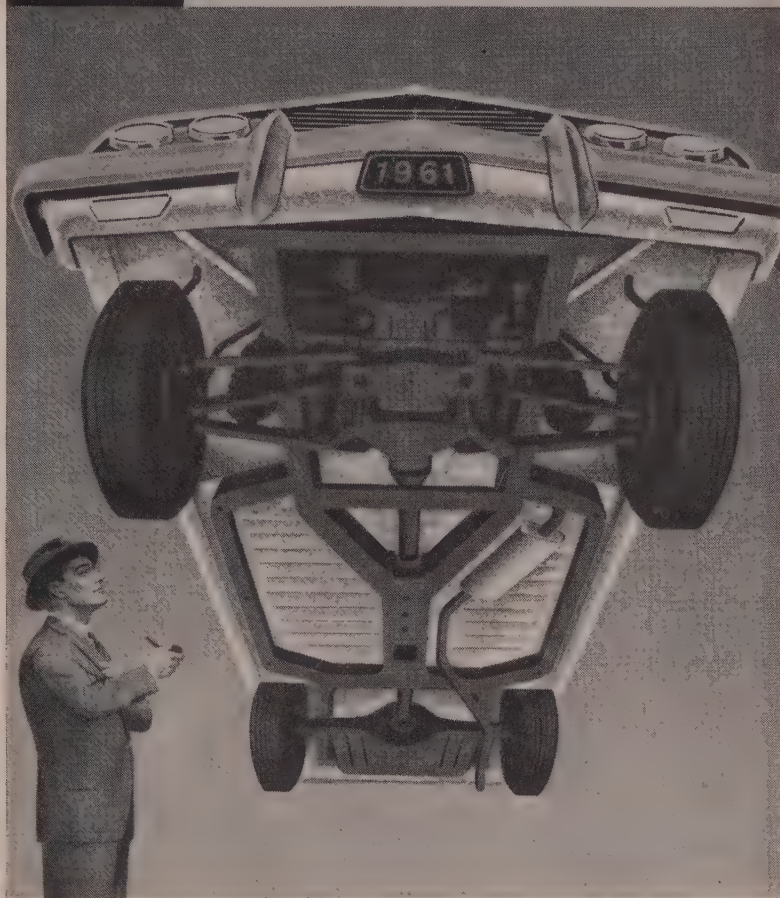
SUMMARY

The international situation governs the economic future of Western Europe to a great extent. Obviously any large blow-up between the Soviet Union and the United States would not only damage the European economy but would also hurt the world and investments in any area would be affected. The political situation of France, with respect to Algeria and Belgium's relations with the Congo, could have an upsetting influence from time to time on the overall Western European picture, especially considering that both these countries are in the Common Market. The recent uprising in Algeria has not affected the European markets to any great extent except in France, but recently placed some prices on the Paris Bourse (Stock Exchange) at levels where they appear relatively attractive for investment purposes.

On balance the economies of the Western European countries should expand over the next five to ten years. The standard of living is still considerably lower than in the United States; yet people are looking for cars, TV sets and other luxuries enjoyed in this country. Therefore, excellent opportunities still exist in the consumer markets. Productive facilities are still inadequate but when they are expanded greater labor forces will be required. Labor is in short supply almost throughout Western Europe, and in many cases it is being imported



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from other countries. Of course the great danger lies in the possibility that labor unions will gain the strength in Western Europe that they have in the United States, but at the present time they are in varying degrees of control in most countries.

In almost half the European countries currency is more stable and perhaps even stronger than the American dollar; and there are a few areas where difficulties are being encountered due primarily to an outflow of gold and unfavorable balance of trade.

Today investment of large portfolios calls for more careful selection than ever before. The Common

Market (now to be made up seven nations instead of six) and The Outer Seven (to which an eighth nation is being added) are gradually creating greater economic strength in Western Europe that should prove highly competitive to American products. Over the long term a merger of these two groups could make the European Community an even stronger factor in World trade. The writer suggests that the day when we limit ourselves to domestic investments is *past*, and it is becoming increasingly *important* to analyze the possibilities overseas.

Many of the stocks of the Western European countries are selling at exorbitant prices based on yard-

sticks of the past because there is a tremendous flow of capital awaiting investment. For that reason it is difficult to find values when one is required, as he must do, in this country, to seek carefully for stocks that offer good values. Frequently the investor might be forced to select issues of little known and small companies, but for the astute investor the opportunities in Western Europe are great. The political atmosphere is healthy and the economic picture very promising. A careful study and educated selection should enable one to do well in committing at least some of his funds in the economic future of the Western European countries.

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DETROIT TO ATLANTA AND RETURN	\$46.80	\$212.85	\$ 96.86	\$117.70
MINNEAPOLIS TO NEW YORK AND RETURN	\$82.23	\$324.06	\$156.18	\$198.89
CINCINNATI TO NEW ORLEANS AND RETURN	\$53.85	\$262.67	\$107.69	\$129.91

All cost figures for family of four (2 adults, 2 "half-price" children) including tax. Plane, train and bus costs are lowest-cost fares quoted as of March 9, 1961. Car costs (except Chicago to Miami) based upon 3¢ per mile for gas, oil and maintenance as estimated by recognized authorities. Cost of meals and lodging not included in any of above figures.



"Most of the motels have TV sets in every room—and we didn't even miss our favorite TV programs. Typical cost for all of us—\$10 a night for a modern, air-conditioned room."



"The Civil War came alive for the kids when we made a stopover at Lookout Mountain near Chattanooga, Tennessee. My wife and I got a big kick out of it, too."



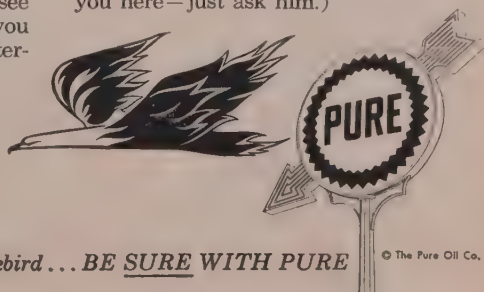
"We followed the *Firebird* and got top mileage and performance with PURE Firebird Gasoline. PURE's clean rest-rooms and 'Royal Welcome Service' are tops, too."

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THE SOUTHERN COMPANY system, reflecting the economic soundness and vigor of its four-state service area, climbed to new highs in sales of electric power and net income in 1960. This was accomplished in a year of lessened business activity nationally.

HIGHLIGHTS OF THE YEAR

	1960
Operating Revenues amounted to	\$319,162,000
A new high — an increase of \$22,504,000 or 7.6%	
Consolidated Net Income was	\$46,150,000
Another new high — up \$2,953,000 or 6.8%	
Earnings Per Share of Common Stock (year-end) were	\$2.06
14 cents above the previous year	
Dividends Per Share of Common Stock were	\$1.40
Up 10 cents over 1959	
Construction Expenditures totaled	\$170,077,000
Down 8½ million dollars from all-time high of 1959	
Sales of Electric Energy, in kilowatt hours	22,760,000,000
A new record, up 8.6%	
Customers Served Directly increased to	1,576,151
37,112 more than in 1959	



The Southern Company 1960 Annual Report

Write for 1960 Annual Report: The Southern Company, 1330 West Peachtree Street, N.W., Atlanta 9, Georgia

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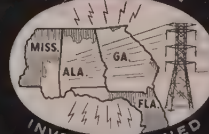
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Analysts Bid Farewell to Europe

by Warren Burns

FRENCH MILITARY AND POLITICAL drama—how historic remains, at this writing, to be seen—climaxed the twenty-four-day European Business Conference of *The National Federation of Financial Analysts Societies*. (March 31-April 23).

Dramatic, for the eighty-five Financial Analysts, and forty-five wives, took off from Paris' Le Bourget airport just two hours before President Charles de Gaulle closed the airports and blocked the runways, following the Algiers coup. In Napoleonic retrospect we sensed a "whiff of grapeshot" at our heels. And in a manner of speaking it was another incident in "le grand tour" of nine European countries where we were royally-treated by Governments and blue-chip corporations alike.

In the course of "le grand tour" we emerged with a delightfully new cognomen: "Kapitalmarktexperten." This was accorded us by *Die Press*, leading conservative newspaper in Vienna—or as the city is correctly called, *Wien*.

Frankly, the "jet-propelled" (sic) trip took us into so many countries and whirled us through so many corporations that it took a diary (for most of us) to remember where we'd been and exactly what we'd seen. The purpose here is merely to recall some of the high-

lights that otherwise might be omitted, while the articles preceding and following deal, in more detail, with many other facets of the trip.

And certainly business-conference luncheons were highlights where prominent European businessmen addressed us. And in England there were several particularly interesting and informative overnight business trips. This writer, accompanied by Edward S. Wilson, president of The New York Society, and four other Financial Analysts, were two-day guests of The United Steel Companies Limited in northern England.

United Steel's Mr. E. T. Sara, commercial and economic advisor, met us at the Sheffield (Midland) station (just 160 miles from Scotland), and after introducing us to T. S. Kilpatrick, general manager of Steel, Peech and Tozer, we toured United Steel's plant at Sheffield.

That evening we were dinner guests at United Steel's ancient and beautiful guest mansion—Clifford House by name. And again, the Analysts put the "microscope" on their guests—this time it was the annual report. Preceding the questions was a short informal address by Mr. A. J. Peech, deputy chairman and general managing director of United Steel.

On the following day we were driven (about 45



AMSTERDAM STOCK EXCHANGE—Board Room. Here, Mr. P. F. J. de Kok, Chairman (center, holding a bull-and-bear statue), is shown with, left to right: Alan C. Poole, Trip Co-Chairman; Miss Magda H. M. van Mil, Labouchere & V., Amsterdam; Edward S. Wilson, president of The New York

Society; Mr. de Kok; Charles E. Exley, President of Detroit Stock Exchange; Edward Ory, Managing partner, Commercial Enterprises; and Mr. J. G. N. de Hoop Scheffer, of the Amsterdam Stock Exchange. The Analysts were allowed to circulate on the floor of Amsterdam's Stock Exchange.

miles away from Sheffield) to another United Steel plant at Scunthorpe, the plant name being The Appleby-Frodingham Steel Company. Again we toured the plant, which had its origin more than a century ago, and again more Analysts' questions.

It was during the United Steel visit that this writer found admiration of a product immediately resulted in gifts, which included a pound of China and India tea and a beautiful metal drinking mug, made from stainless steel manufactured at the Appleby-Frodingham plant.

Mr. J. D. Joy, director and general manager of Appleby-Frodingham, indicated much interest in the Analysts' questions and correctly presumed that it was largely upon the basis of such questions that Analysts judge a company and its management. This obviously pleased Mr. Joy; and the writer (while not a Financial Analyst, *per se*) would judge that the reaction of his five accompanying Analysts to United Steel Companies Limited was extremely favorable.

HOOGOVENS REVISITED

In Amsterdam, a group of approximately 23 Financial Analysts visited Koninklijke Nederlandsche Hoo-govens en Staalfabrieken N.V. and Breedbank N.V., IJmuiden, Netherlands (the Royal Netherlands Blast Furnaces and Steelworks and affiliated companies). In 1959 the Analysts made their first visit here. Commenting on this, Prof. Dr. J. F. Ten Doesschate, a company director, said in part:

"In 1959 there was a list of suggestions sent to the companies The New York Society visited in order to give them an idea about the information which was of interest to the Analysts. I have used this list as a basis for my speech today in the hope that what I shall tell you will be what you want to hear.

"The two principal raw materials needed to manufacture pig iron are iron ore and coal. There are few plants in the world where both these materials are to be found close to each other and in the past therefore steel plants have been situated as near as possible to the source of these raw materials. At the beginning of the century in Holland there were only limited supplies of coal from the State Mines and there was no iron ore at all. However, there were various factors which led us to believe at that time that the creation of an integrated steel plant would be economically possible.

"In the first place the major part of the iron ore used

'PREMIERE ETAGE' EIFFEL TOWER

A highlight in a high place was the reception held by Model, Roland & Stone S.A. many feet above the Parisian sidewalks in the famed Eiffel Tower. All Financial Analysts and wives were in attendance, in addition to representatives of the French Government, press, and industrialists. Heading the French Government delegation was M. Andre de Lattre, director in the Cabinet of the Minister of Finance. Also present were members of The Paris Society of Financial Analysts. Pierre Feuchtwanger, general manager of Model's Paris office arranged the reception.



ON STEPS OF OESTERREICHISCHE LAENDER-BANK, Vienna. John Lowell, president of The Boston Security Analysts, left, is shown talking with (left to right) Oskar Henisch, president of The Vienna Stock Exchange; Dr. Josef Koliander, member of the Managing Board of Oesterreichische; and J. Marion Engler of The St. Louis Society of Financial Analysts.

in Germany's steel centre the Ruhr was imported via Rotterdam and we realized that by setting up a steel plant on the coast a considerable saving in transport costs could be achieved. Secondly there was competition developing among the countries from which we imported our coal to capture the Dutch market and thus we could obtain relatively cheaply the second raw material required for steel making.

"Furthermore there was a growing home demand for steel and as far as export was concerned a coastal plant meant that the heavy end-products of the steel industry could be cheaply transported both overseas and to the hinterland. . . .

"As you know we belong to the European Coal and Steel Community and therefore are bound by the regulations laid down in the Treaty of the E.C.S.C. One of the basic principles of this community is a completely free market. This means that there is no cartel-forming and prices are freely set. The only obligation we have in this respect is that we have to publish our prices. You may be interested to know that last week, as a result of the revaluation of the Dutch guilder we lowered our prices to meet foreign competition. I may say that we regard the community as extremely valuable since it has enabled us to enter markets which were previously highly protected.

"The European Economic Community is also of great importance to us since not only some of our products (cement and fertilizers) are covered by its tariff agreement but also because our customers and suppliers of equipment are subject to the provisions of the E.E.C. Treaty.

"In this connection you may have noticed in the breakdown of our sales figures that only 15% of our plate is exported, 88% of our hot rolled product and 65% of our cold-reduced product is exported while only 36% of our tinplate is sold abroad. Lastly the whole of

our cement production is sold at home, while part of the fertilizer production is exported.

"I think I have covered most of the topics suggested by the previous group of Financial Analysts from your Federation. There is one last point that must be dealt with. As you have seen we planned extensive expansion for our concern. You may have asked yourselves whether there will be room enough. Luckily we own about 1,500 acres of which only about one-third is at present used. So we foresee no difficulties on this score."

A half day and lunch with the management of M. A. N. in Augsburg (outside of Munich) proved of vast interest. This company is world famous as machinery manufacturers including printing presses. And here in a large museum is Rudolf Diesel's original engine—still in running condition. Our host was Dr. A. Choinowski, board chairman.

Siemens & Halske A.G., in Munich was another company in which the Financial Analysts indicated great interest. The following excerpt from Siemens' current annual report gives a summarized picture of the corporation's activities.

Finding ourselves confronted with a great many new problems in research and development during the year of report, we proceeded to add new buildings and equipment to our facilities. In line with our policy of centralizing research work, our laboratories for inorganic and organic chemistry have now also been transferred to our Central Research Laboratory in Munich.

Research in the field of materials resulted in establishment of new concepts with regard to ferroelectric, ferromagnetic and other materials, the physics of thin layers, and the chemistry of special insulating materials. Elaborate studies were also devoted to solid-state physics and the physical laws governing low-noise amplifiers.

Our routine development work concentrates on steadily extending our line of large-size systems for all branches of communications engineering. Parallel with this, considerable efforts are also being devoted to the development of microminiature electrical modules and mechanical parts and their application in the interest of the evolution of structural design.

Extraordinarily heavy demands were made upon our factories. Through the extension of our Berlin, Karlsruhe and Munich works and the establishment of ancillary plants we succeeded in again expanding our production capacity despite the prevailing shortage of labor; new factories in Augsburg and Regensburg likewise contributed to expanding our production capacity. Cooperation with

'STRIPE' = 'SIGNAL'

Indicative of the trouble all international companies have — when marketing their products — was emphasized by Unilever N.V., at Rotterdam. It seems that the toothpaste which is known in the United States as "Stripe" is, because of copyright laws, marketed throughout Europe as "Signal"—according to A. W. J. Caron, Unilever's Coordinating Director. Unilever is the world's sixth largest company.

our designing offices resulted in notable successes in rationalization through the introduction of new construction principles economizing both in space and weight.

Production is proceeding according to schedule at the factories we installed in recent years in Argentina and Brazil. The efficiency standards of our personnel are steadily improving. The training courses organized at our factories, to which we have long devoted particular attention, are continually proving to be a key factor in production. Competitions for accident-free work were conducted at all our factories with most rewarding results.

The expanding volume of business of our Telegraph and Signaling Division was due in large measure to progress in engineering which has secured a broader market for our products.

The Analysts on the "southern tour" will also kindly remember Siemens for gift record albums of *Die Fledermaus* and *Don Giovanni*. In addition, Siemens was host at the Munich Opera where *Die Fledermaus* was being presented.

And while on the subject of Opera, the "southern" Analysts were again opera guests in Vienna where they saw *Aida* at the Vienna State Opera House. Members of The Council of the Vienna Stock Exchange were our hosts. The Association of Austrian Banks and Bankers transported all Analysts and wives, one evening, to the Vienna Woods for "tasting of the new wine." (P.S. It had melodic overtones!).

The historic significance of this, our second European Business Conference Trip, came (to this writer) during personal conversations with Robert Allan, a Member of Parliament, and editors of *The Times*, London.

It was not so much the observations these Englishmen made, as the very fact that they were more than willing to talk with us. *Financial analysis*—in London as throughout most of the other European cities—has already attained significant stature. And in a sense we, the U. S. Financial Analysts, were basking in the glory which our European brethren have attained.

For it was often they who opened the doors all over Europe. And it's now certain that members of both European Governments and European industrial organizations alike are ready and able (though methods of reporting differ somewhat from the U. S.) to discuss the financial and political significance of their operations with Analysts.

And so as the world becomes geographically smaller, the stature of Analysts becomes financially greater.

LONDON BANKER ANALYSES AN ANALYST

Short of pounds? Well one of the Financial Analysts on the European tour strolled into a London branch of Bankers Trust Co., briefly explained his plight, and five minutes later walked out with \$100 worth of English pounds—without showing his passport and/or other identification.

Later, when a U. S. draft showed up at the same bank, and after the Analyst collected the remainder, he asked the banker "how come such swift service without proper identification?" "Oh," said the Englishman, "everybody knows the U. S. Financial Analysts are in town."



Texaco in Trinidad is a big investment in the development of oil—and individuals.

A visitor to this lovely, lively island will see thousands of Trinidadians at work where once such opportunity did not exist. He will see boys, 16 to 20, enrolled in Texaco training courses, continuing as on-the-job-with-pay apprentices. Students showing unusual aptitudes are awarded Texaco scholarships for university study. For all, it is a dream of success and security come true. Texaco in Trinidad is creating new futures for the people, sound growth for the economy of the island.

TEXACO: SYMBOL OF WORLD-WIDE PROGRESS THROUGH PETROLEUM



European Businessmen See Free Enterprise Secure

by Monte J. Gordon *
European Trip Co-Chairman

THINKING IN broad overall terms, I would say that apart from the itinerary, there was a significant difference in my impressions on the recent trip of Financial Analysts to Europe as compared with the first trip in April, 1959. These impressions came largely not from words spoken directly on a particular subject in many cases, but rather, from piecing together fragments of the many different conversations held with the executives of the various companies visited.

For example, a word which recurred repeatedly throughout discussions, which hardly appeared in my recollection of the first trip, was "rationalization." Indeed, the very use of this word to describe what is a very common phenomena to the American Financial Analyst is indicative of the slight yet significant difference with which the European businessman approaches his problems as compared with his American counterpart. Rationalization broadly refers to modernization of existing equipment, particularly as it concerns increasing mechanization and installation of equipment using automated processes. In a still broader sense, it also refers to changes in the corporate and management structure for facilitating efficiency.

Obviously, rationalization is being conducted in Europe particularly in the industries which participate in the heavy capital goods sector. It is also taking place in other durable goods areas but its impact apparently, at the present time at least, is less evident. The very fact that rationalization recurs so often in a European's thinking, and is very

much an integral part of the long term program, is indicative of still another factor with which I was impressed. To put it bluntly, the European economy is no longer, in my opinion, dependent upon the United States in the same sense as it was about two to five years ago. That is, the degree of technical capability and know-how has progressed at an amazing rate to the point where the factor of labor costs to which so many analysts have pointed to as the reason for competition offered by European concerns to American companies, is in truth not as significant as it was.

Curiously, the European labor cost is not the factor which the European claims as the basic reason although he does acknowledge it has some bearing. Rather, it seems to me, it is the rapidly developing capital efficiency which is by far the more important. Indeed, as the use of capital, particularly more efficient capital equipment, increases the importance of the labor factor almost of necessity begins to decline. While I was not able to obtain figures sufficiently exact to sustain this as a full-fledged judgment, I would say

certainly, that the competition in foreign trade offered by the European will come on the basis of a closer equality and, in some cases, an even greater efficiency with American productive ability.

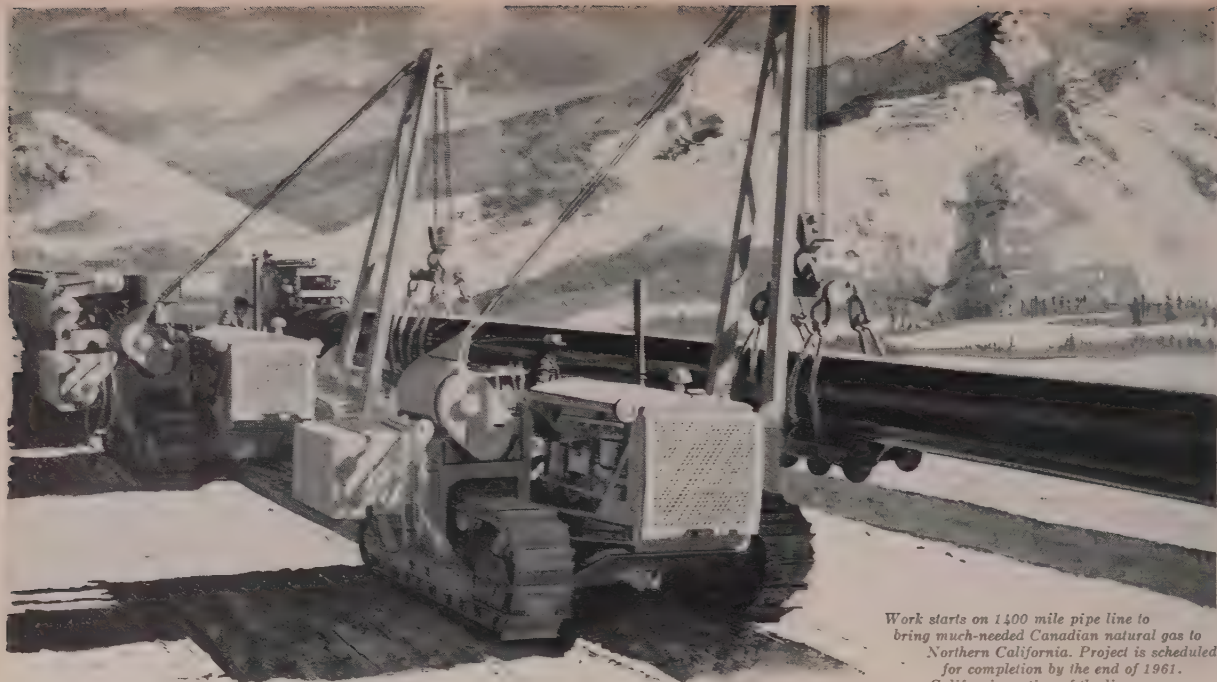
Common Market and Outer Seven

To this must be added another factor. During the course of our trip, we conducted many conversations and discussions concerning the relationship of the European economic community with the European free trade area or the Common Market and the Outer Seven, as they are more generally known. Indeed, we had specific addresses delivered on just this subject. It is impressive that virtually all Europeans seem convinced that the Common Market and the Efta will come together as a single unit in what can only be called the relatively near future. The general feeling appears to be that France holds the key to the solution of this problem. More important, however, in this regard is the apparently strong feeling of the European businessman that these two trading units must come together. Indeed, the European businessman is al-



IN GOTHENBURG, SWEDEN—Inge A. Stenberg, executive vice-president, center, is shown flanked by Financial Analysts who went on the "northern" leg of the European Business Conference Trip. Walter P. Stern, trip group leader, is third from left.

* Director of Research, Bache & Co.



Work starts on 1400 mile pipe line to bring much-needed Canadian natural gas to Northern California. Project is scheduled for completion by the end of 1961. California section of the line is estimated to cost \$58,000,000.

P·G and E 55th ANNUAL REPORT - 1960

Excerpts:

The year 1960 was one of the most eventful in the Company's history.

New highs were established for sales of gas and electricity, operating revenues, and net earnings. The rate of customer growth fell only slightly below that of the previous year. For the second successive year our sales of electricity exceeded those of any other operating electric utility in the country.

Net earnings for the common stock established a new high, equivalent to \$4.14 a share compared with \$3.70 in the previous year. Part of this improvement resulted from colder weather in 1960 which substantially increased the demand for space heating. There was no change in the number of common shares outstanding.

In a year filled with a number of important developments, perhaps the most notable was the receipt in August of the last governmental authorization required for construction of the Alberta-California project. This 1,400-mile, \$300 million natural gas pipeline is expected to be completed in late 1961. Construction began in October, climaxing a four-year effort by the Company to obtain access to the natural gas reserves of Western Canada. The successful outcome is of great significance to the future growth of the California economy and to the long-range outlook for the Company.

Construction expenditures amounted to \$173 million in 1960. These are expected to rise to approximately \$230 million in 1961. The major portion of the increase will be attributable to expenditures for the California section of the Alberta-California project.

Once predominantly hydro in its electric resources, the Company now relies principally on thermal sources of power. In the past year we placed in operation or commenced construction on three different types of thermal generating facilities. At Pittsburg Power Plant we completed a 330,000-kilowatt conventional steam unit which is twice the size of the largest units previously installed on our system. Like three of similar size that are under construction, this unit uses either oil or natural gas for fuel.

The Geysers Power Plant, which we also placed in operation in 1960, is America's first electric power generating station utilizing natural steam from the earth. Although not of major size, it has attracted considerable attention as a possible forerunner of other similar plants.

Nuclear energy holds much promise as a future economic source of electric power. The Company has been extremely active in this field since 1951. Late in 1960 we received final approval from the Atomic Energy Commission to construct a 60,000-

kilowatt nuclear unit at our steam plant near Eureka. Construction of this unit is now under way, to be completed in 1962. The power produced is expected to become competitive in cost with power from conventional sources in the Eureka area after about three years' operation. We are continuing our studies looking to the construction of a large-scale nuclear plant in the San Francisco Bay area.

Although relying increasingly on thermal power, we are continuing to construct hydro facilities. Additions to our hydro-electric generating capacity under construction include a 42,000-kilowatt plant on the Kings River which will be completed in 1962, and replacement of the old DeSabra and Stanislaus Powerhouses with modern plants which will increase their capacity by 47,500 kilowatts.

The change in our National Administration which occurred on January 20 is of great importance to all Americans. Undoubtedly the new Administration's major efforts must be directed toward maintaining our country's position of world leadership and toward keeping us militarily strong as a deterrent to potential aggressors. Neither of these objectives can be assured, however, unless we maintain a strong economy at home. Essential to a strong domestic economy is a progressive and financially strong utility industry.

FOR THE BOARD OF DIRECTORS

K. C. Christensen

Chairman of the Board

N. R. Letherland

President

PACIFIC GAS and ELECTRIC COMPANY

245 MARKET STREET, SAN FRANCISCO 6, CALIFORNIA

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Hydraulics

Packaging Machines

Industrial Equipment

SUNDSTRAND

Broadened activities in 5 major product areas

A report on 1960

Sundstrand's research and product diversification continued on a substantial scale in 1960. Additional lines are under constant development to maintain and expand the activities throughout the company. Prior development and acquisition of new products helped sustain sales volume for the year at \$73,176,174.

During 1960 we secured contracts on a number of Aviation Division programs which will go into production in 1961. The development work and progress which we have made with numerically controlled machinery should produce a significant volume of new orders. A consolidation of foreign holdings should be of major benefit to the company.

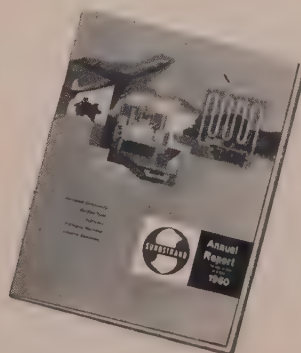
Net earnings were \$1,985,374, compared with \$3,753,172 the year before. In common with general industrial activity, we are feeling the effects of the downward trend. However, measures to reduce costs and control expenditures have improved our earnings outlook and we are confident that over a period of time we will continue to grow as in the past.

Comparative Statements of Income

	1960	1959
Net Sales	\$73,176,174	\$81,627,386
Net Earnings before Taxes	4,094,574	7,619,392
Income Taxes	2,109,200	3,866,220
Income Taxes per Share	1.30	2.43
Net Earnings after Taxes	1,985,374	3,753,172
Earnings per Share	1.23(a)	2.36(a)
Shares Outstanding	1,619,760	1,592,295

(a) Based on shares outstanding at end of year.

Bruce F. Gloor
President



SUNDSTRAND CORPORATION

ROCKFORD, ILLINOIS

Copies of our 1960 Annual Report
are available upon request. Address
Sundstrand Corporation, Rockford, Illinois

ready thinking of Europe as a homogeneous market, similar in its basic respect to the homogeneity of the American market. Thus, almost always they pointed to the 160 million people of the European area as representing their potential market and compared the prospects for their company in the light of this market to that offered by the American market of 180 million people. Interestingly, the element of population growth did not enter into the discussions anywhere near as often as is the case when contemplating the American market but rather, it was the joining together of all these countries into a uniform market which held the fascination of the European businessman.

Businessmen Confident

It is also obvious that the European businessman is operating in a social and economic framework different from the United States, particularly in terms of its stresses and strains. The identification, for example, of a national with his own country was never far below the surface in any discussion, as well as the problem of the difference in the approach of the more liberal political parties compared with the approach of the more conservative. While the differences between the two groups of political thought appear to the American to represent a very sharp cleavage, the European businessman seemed confident that business enterprise of a private nature, as it exists today, could continue to function very well no matter which party was in power. This, of course, varied from country to country and certainly could not be generalized except to say that the belief and faith of the average European businessman in private enterprise as a means of doing business seemed serene and confident.

Well Suited Tax Structure

One of the most striking impressions which I obtained concerned what I can only call an intelligent tax structure suited particularly to the expansion of capital equipment. In virtually every country, while the taxation rate on business income ap-

pears to be equal to ours, and as always, the businessman bemoans the burden he must carry, the special provisions available in the nature of depreciation and similar allowances related to new plant and equipment expenditures are most striking. I believe, in fact, that the Kennedy Administration could well study the European tax structure as it relates to business capital expenditures and take a page from their book if the announced policies of encouraging growth and expansion are to be implemented. The European businessman can, for example, take in one year as a credit, taxes paid in the previous year and does depreciate his plant on a much more rapid basis in many cases than we do. I even heard one instance where a plant was completely depreciated in the same year in which it was constructed. The result is that the effective tax rate is significantly below the indicated rate and very conducive to the expansion of plant facilities. This tax structure derived from the efforts of the European governments to rebuild their facilities shattered by World War II.

Capital Facilities Sound

I believe that the testimonial to the success of these tax policies, which continue in large measure today, is given by the obviously sound condition of European capital facilities and the aggressiveness with which the European businessman is expanding. I am sure that detailed study of these structures can only lead to the conclusion that the growth of the American economy would be materially speeded should similar tax programs be established here. Of course, the job of the analyst is complicated by the necessity of having to understand this tax structure and making adjustments to the income statements and balance sheets, as they are given, for the effect on earnings of the various allowances and reserves which companies can and do take.

To sum up my more general impressions, I would say that the condition of the European economy is quite good, although I did not have the feeling of a booming economy

as we know it, but rather, of one which looks confidently to the future and which is now growing at a completely satisfactory rate so far as the European businessman is concerned. In all the countries political stability as related to the climate for free enterprise systems appeared secure.

Belgium Bank Stocks

Highlighting some of the countries which we visited, I was rather impressed in Belgium with the fact that the banking structure is materially different than that of the United States in that the banks are significantly involved in the management of companies. In this respect, they may almost be classified as management companies. The advantage of this, at least from the European point of view, is the access to funds and financial talent which the company enjoys due to its close relationship with the bank. It was also impressive that the bank stocks in Belgium represent really a form of diversified commitment in industry in Belgium. For example, the roster of companies in which the Societe Generale De Belgique is interested ranges from heavy industries into the consumer area. Indeed, the banks played a large part in Belgium in arranging the visits with the various companies which formed our program.

It was interesting to sit at a meeting with one of the companies, namely, Cementiers et Briqueteries and hear the company's managing director candidly set forth that the company was part of a cartel in the European area. He pointed out that cement production capability in the European area comfortably exceeded demand although the demand was growing at a rate of 2% to 3% annually. The management undertook to diversify geographically, as they put it, in order to offset this condition in Europe and to enhance their earning power. As a result, this company had taken stock interests in Canadian companies and was considering the American market as well as South America. It seemed to me that considering the activities in Europe would provide a cash flow, the plans of the company for expan-

sion abroad commanded attention to this particular issue.

As a general point, the bank stocks in Belgium, which appear generally to be selling at a price giving a discount of about 25% from portfolio values, appear to be interesting vehicles for the more conservative investors. For the much more speculatively inclined, our visit to Union Miniere was of considerable interest. In the case of the banks, virtually all commitments in the Congo have been written down very substantially and should they lose all commitments in the Congo, the effect would be very slight so far as asset value was concerned. Union Miniere, on the other hand, pointed out that they had not lost one single pound of production since the Congo became an independent state. While they would not say in so many words, it appears they were of the opinion that this record would hold. Obviously, the risks are very great and I would say that despite its already substantial drop in price only those who are well prepared to take very considerable risks should consider this stock.

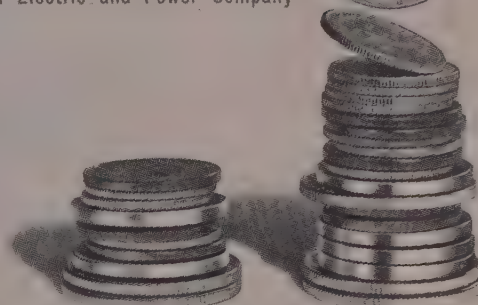
German Economy Cautious

The overall impression given by the German economy is that while operations are still at a high level, for example, steel companies are running above 90% of capacity, the economy is beginning to taper off slightly. It is difficult to see this in exact terms so far as numbers are concerned, but in putting together estimates by different companies, it seems evident that they are slowing down or at least generating a more cautious attitude. August Thyssen-Hutte continues as always to be impressive, particularly when one considers the tremendous job of rebuilding accomplished by the German industry since the war. This holds for Bayer as well as Mannesmann and Rheinische Stahlwerke to mention just a few. Bayer is working actively in many directions encouraged by its aggressive research program. I have no doubt that from the long term point of view, this company continues to have merit.

Our visits to Rheinische Stahl-

MAY-JUNE 1961

1960 ANNUAL REPORT Virginia Electric and Power Company



1950-\$5.03 1960-\$1.86
EARNINGS PER SHARE OF COMMON STOCK

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Growth—in number of customers and customer usage.
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They add up to increased earnings for shareowners. Better service for customers . . . at reasonable rates.
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The Secretary, Virginia Electric and Power Company

1960 HIGHLIGHTS

	1960	Increase over 1959
Property and Plant	\$718,000,000	\$53,000,000
Operating Revenues	160,588,000	9,732,000
Balance for Common Stock	27,720,000	2,328,000
Earnings per share	\$1.86	\$1.16
Customers—Electric	761,700	18,600
Gas	100,800	3,300
Electric Sales—thousands of kwh	8,110,000	607,000
Service Area Peak Load—kw	1,772,000	155,000
Gas Sales—thousands of cubic feet	7,874,000	907,000



VIRGINIA ELECTRIC AND POWER COMPANY

7th and Franklin Streets, Richmond, Virginia

werke and Mannesmann were new in that these companies were not on the previous agenda. I must say first, as a general note, that in the case of all German companies, it was most impressive that they were so willing to speak freely of their operations concerning the details of profit contribution and projected plans. As always, and as in the case of all the European businessmen, the projection of earnings is not forthcoming but significantly, the amount of information willingly given compares very favorably with virtually most any American company.

Mannesmann, which is a heavy industry firm, was most impressive in terms of the range of its activities and the aggressive concepts of management as far as seeking business. The managing director pointed with pride to a new member of the board of directors who would be regarded as young even by American standards. This was part of a policy, he pointed out, of bringing in new young people. Prospects for the company, while keyed, of course, to the outlook for the heavy industry, appeared to me to be rather good and the shares would merit attention of investors.

Rheinische Stahlwerke or Rhein-stahl as it is more commonly known, was also very impressive. Unfortunately, time ran out on us and the visit was shorter than would have been desirable. Again, the company was fully prepared to meet any and all questions. The area of statistical data prepared for our visit was excellent and a clear delineation of the company's position. While the company has been losing its share of the market in certain areas such as coal, its interests and activities in manufactured and processed goods has been increasing quite nicely. The range of production of Rheinstahl was very interesting and gives the company participation in areas with considerable potential. I frankly had not run across the company except very casually, but not being a specialist in foreign securities, this is not necessarily unexpected. To that extent, however, viewing the Rheinstahl figures and listening to the management was quite an experi-

ence. I believe that the shares also are well worth consideration.

Excellent Opportunities Available

To sum up, the German economy, although it may be slowing somewhat, is peopled by companies which are characteristically well managed in terms of relative efficiency and aggressive willingness to do business. I believe the area continues to afford excellent opportunities. The report of the Deutsche Bank was very good and reflective of this bank's broad and continuing interest in the German economy. Certainly, those who are inclined toward the financial institution type of investment should consider this issue.

I would also add that this trip to Europe was highly successful both in terms of the detailed discussions which the companies delivered and their willingness to answer the many questions posed by the Analysts. It

was, I think, most far-reaching in the overall impressions which were conveyed and in the awareness that the European area of investment, while showing abnormalities in price related to concentration of funds by foreign investors on specific issues, still affords many opportunities for the discerning investor who is willing to search patiently and buy longer term values.

UNION CARBIDE

A quarterly dividend of ninety cents (90¢) per share on the outstanding capital stock of this Corporation has been declared, payable June 1, 1961 to stockholders of record at the close of business May 5, 1961.

JOHN F. SHANKLIN
Secretary and Treasurer

UNION CARBIDE CORPORATION

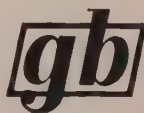
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AMF sets new record highs *in 60th year*

In 1960, new highs were attained in net income, sales, rentals, dividends, unfilled orders at year end, employment, capital investment, and product development expenditures.

1960 net income up 21%—\$24,104,000 compared with \$19,888,000 for 1959.

1960 gross revenues up 23%—including a 19 per cent increase in rental income to \$69,233,000—another new high. Total revenues: \$361,985,000.

Dividends increased—after dividends on preferred stock, earnings amounted to \$3.06 per common share compared with \$2.55 in 1959 when 136,297 fewer shares were outstanding. 1960 was AMF's 34th consecutive year of dividend payments on common stock and the fifth that the dividend has been increased.

Backlog up 20%—at year end, the unfilled order backlog was \$191,387,000—20 per cent higher than in 1959. Not included, is AMF's substantial minimum rental income from Automatic Pinspotters and other leased machinery.

Other highlights—in 1960, a record number of AMF Automatic Pinspotters was installed—overseas operations were expanded—promising new acquisitions were made—leisure-time products were added—government business increased—AMF employment increased to 18,500 persons at year end, another record.

These are the highlights. We will be pleased to send you a copy of the 1960 AMF Annual Report which details these and many others.

Morehead Patterson
MOREHEAD PATTERSON
CHAIRMAN OF THE BOARD

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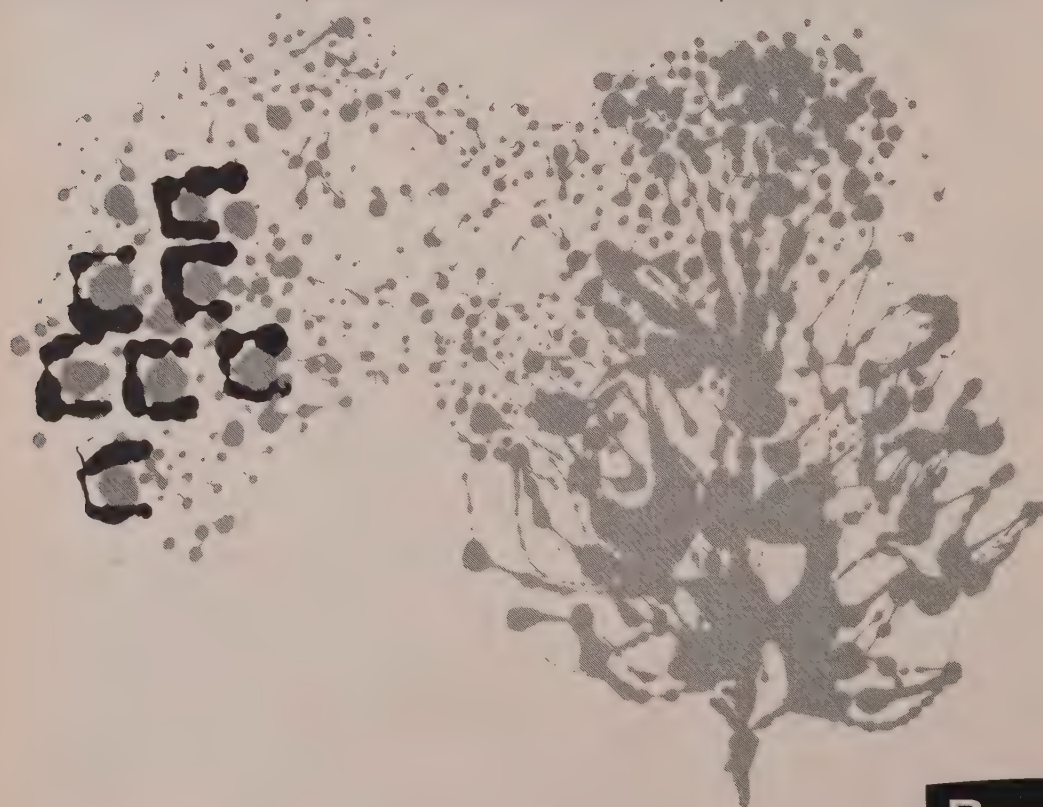


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*Creators and Producers of Atomic and Electromechanical
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Basic as bread... is the role of electronic instrumentation in human progress. And often, as close to home ● Here, a food processor relies upon a Beckman oxygen analyzer to guarantee the freshness and flavor of orange juice. There, using ultracentrifuge, electrophoresis apparatus and chromatograph, immunochemists isolate ragweed allergens in the fight to control hay fever. Farther afield, a Beckman high temperature ceramic potentiometer helps launch and guide a missile ● Everywhere, in the pursuit of quality, the quest for a cure, the maintenance of leadership—Beckman is part of the plan. And wherever they are—in the laboratory, in the factory or in space—Beckman components, instruments and systems are basic ● They are the things on which Beckman builds its success...upon which users of Beckman products build theirs.



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Shareholder Interest in Europe Growing

by Donald H. Randell *

THE RECOGNITION of a world-wide trend toward varying degrees of inflation has heightened shareholder interest in Europe's natural resource stocks. As a consequence, some emphasis was placed on such companies during the Financial Analyst trip abroad. The undoubted highlight of this phase of the program was the meeting held in The Hague with the top management team of Royal Dutch-Shell Group. On hand to outline the Group's activities and to survey the world petroleum outlook was the following impressive array of managerial talent:

J. H. Loudon, President & Managing Director; L. E. J. Brouwer, Managing Director; G. B. Huiskamp, Finance Coordinator; P. P. Escoffier, Marketing Coordinator; J. C. Fitzgerald, Regional Coordinator, Europe & North Africa; W. F. Mitchell, Director of Chemical Division; C. S. Hadfield, Controller, Shell Transport; D. deBruyne, Finance Manager, Royal Dutch; R. H. vonNierop, Coordinator, Exploration & Production; D. A. Glen, Oil Supply & Planning; W. Wieringa, General Counsel; and A. J. W. S. Leonard, Budget & Financial Statistics.

In addition, Mr. J. H. French, Vice President of Asiatic Petroleum (and the New York resident contact man for the Group) had flown over to be present for the occasion.

After an analysis of the prospects for Royal Dutch-Shell by Mr. Loudon and Mr. Brouwer and their staff, the meeting was opened to questions from the floor. While the topics propounded were sometimes quite direct, the answers were forthright and informative. The Analysts were left with the general impression that while the international oil business, in common with most world-wide enterprises in this day and age is subject to more than normal uncertainties, the future may be regarded with cautious optimism. Royal Dutch-Shell has an able, ag-

gressive and farsighted management that can be counted upon to keep the company in the very forefront of the world oil industry.

The meeting was then adjourned to the Group's spacious Research Laboratories in Amsterdam where, after a buffet lunch with the Staff, inspections were made of the impressive scientific and research effort being conducted toward the end of improving old techniques and perfecting new ones and upgrading and developing the product line.

Incidentally, the ladies of the party are still talking about the delightful day spent among the beautiful canals and eye-catching floral displays of the Netherlands at tulip time. Royal Dutch and Hoogovens acted as joint hosts for the excursion.

Rio Tinto Meeting

A second facet of the natural resource picture was underscored in an extremely interesting meeting held with officials of The Rio Tinto Company, Ltd. at their headquarters in Barrington House, London. Our hosts included:

Mr. J. N. V. Duncan, Managing Director; Sir Mark Turner, Finance Director; Mr. Hugh Saunders, Deputy Managing Director; Mr. Frank Byers, Deputy Managing Director; Mr. P. H. Truscott, Company Secretary & London Manager; Mr. J. R. Robinson, Company Treasurer; Mr. R. F. St. G. Lethbridge, Head of Technical Division; Mr. J. McGilchrist, Assistant Company Secretary & Head of Secretarial Department; Mr. J. D. Peek-Briggs, Chief Accountant; Mr. J. A. Clay, Economic Adviser; Mr. P. J. G. Elwes, Assistant to Treasurer; and Mr. P. A. Spanoghe, Head of Staff and Public Relations Section.

With an inspired foresight as to the way the political winds were blowing around this troubled globe, the Rio Tinto management long ago decided that geographical and resource diversification was prudent. Consequently, in 1954, a major in-



Donald H. Randell of the New York Society of Security Analysts, left, is shown talking with Dr. Hans Hacker, economist for the Oesterreichische Laenderbank in Vienna.

terest in their fabulous Spanish copper and sulphur properties was sold. The proceeds have been parcelled out into uranium, copper, oil, iron, silver, gold and even gem emeralds, in areas throughout Africa, Australia, Canada, South America and even the United States. While Rio Tinto's oil interests were recently exchanged for a block of shares in growth-oriented British Petroleum Company, the management is examining possible link-ups with major American companies on thorium extraction plants, on beryllium operations and with some Japanese partners in African copper and Brazilian iron.

While Rio Tinto has been hampered of late by the cutback in the demand for uranium, the expected shrinkage of the current excess of fossil fuels hints at a brighter long term future for this very able group of managerial, metallurgical and geological talents.

A striking indication of the vast proximity of history to posterity is offered in a trip to Rio Tinto's Board Room where yesterday's Roman statuette, fashioned a score of centuries ago from Spanish copper, stands guard over a tray of gleaming

* E. F. Hutton & Company

emeralds that are just now coming from the lapidary's bench.

Vickers Group

A somewhat different approach to the investment of funds in productive enterprise was evidenced by the industrial colossus known as the Vickers Group. The rare genius of this tremendously successful team has been attested to over the years by the pre-eminence of the position held in the aircraft, shipbuilding, engineering, construction, steel, aluminum and enumerable other fields. From the war famous Spitfire through the revolutionary Viscount turboprop to the VC10 now on the drawing boards, Vickers has been known for its skill in aircraft. Less well-known in the United States is its long history of excellence in shipbuilding which led to its selection as the British partner of General Dynamics' Electric Boat Company, in the construction of nuclear submarines to share in the defense of the free world.

At a management conference held for the visiting Financial Analysts by Viscount Knollys (Chairman of Vickers, Ltd.) Major General Sir Charles Dunphie, Managing Director; Sir Leslie Rowan, Director of Finance; and Mr. W. D. Opher, Director and General Manager, the Vickers policies were expounded. The philosophy of decentralized control seemingly works with maximum effectiveness in the overall guidance of this far-flung industrial empire.

Of particular specialized interest to the Analysts was the mention made of the four fields that had been selected by the company as offering maximum attractiveness in their plans to expand corporate diversification.

The areas cited were: (1) Accelerated freeze drying; (2) Hovercraft; (3) Handling equipment (for atomic wastes, etc.) and (4) Irradiation and many of its related functions.

The skill and vigor of this management was indeed inspiring, and supplemented the impressions formed by those of our group who had

been selected to go on the field trip to Vickers-Armstrong at Barrow-in-Furness.

After an overnight train trip (which in an English sleeping car, is somehow memorable) we were awakened by a porter with a welcome pot of hot tea. After a cordial greeting from our hosts in Barrow-in-Furness, we all embarked on an extensive but thorough inspection journey through the yards where ships were being built or repaired for customers around the world. While nuclear submarine work was underway, security provisions precluded personal examination of the construction, but the business-like atmosphere of the entire operation was much in evidence.

A general discussion of Vickers-Armstrong (Engineers, Ltd. and Shipbuilders Ltd.) was conducted by Mr. Arthur Storey and Mr. Leonard Redshaw, the respective Directors and General Managers of the two companies at a most enjoyable luncheon. It was particularly gratifying to hear from our British friends how highly they valued the technical knowledge and the all-out cooperation offered them by our own Electric Boat Company of Groton, Connecticut, once Vickers had been selected to assume part of the job of building up the free world's nuclear fleet.

The afternoon was devoted to an explanation, in the plants, of the work being done by the engineering



Miss Magda H. M. van Mil, co-director of Research for Labouchere & V., Amsterdam, is shown with four other Dutch Financial Analysts. They are, from left to right, J. E. Verwayen of De Twentsche Bank; G. L. Fock and J. De Jongh both of Nederlandsche Handel-Maatschappij, N. V.; and W. Van De Wardt, Hope and Company.

group with special emphasis on the program underway for the manufacture and testing of diesel engines. The high calibre of the product being turned out, the obvious skill and good morale of the workmen, and above all, the visible evidence of the managerial talent that is the prerequisite to the setting up and supervision of such plants was most assuring to those of us who are conscious of the challenge in the world today.

The next item on the agenda was a motor trip through the incredibly beautiful lake country that borders Barrow-in-Furness and a delightful dinner in a country inn near famous Lake Windermere. It was something of a revelation to see the after-hours transformation of an alert engineering team into gracious and relaxed hosts.

Messerschmitt

A visit to the Messerschmitt plant in the historical city of Augsburg revealed a different investment philosophy than that evidenced by the diversification program at Vickers. It seems clear, however, that the difference is one that stems from the economic pattern of the companies' domiciles rather than any other cause, despite the wartime feud between the Spitfire and the Messerschmitt 109.

German aircraft production was severely curtailed by the peace treaty and recurrent attempts to use West German skills more fully in rearmament of the free world forces have met with many political roadblocks. Progress appears to be accelerating however, work on the Fouga-Magister aircraft, in use by the Bundeswehr, has led in turn to a contract for production of the Lockheed "Starfighter."

While aircraft work initially was limited to manufacture under license, lately the Messerschmitt research and development team is swinging into action. This seems to be a harbinger of better things ahead. As one who watched the "brain children" of this organization in action, having them on our side is preferable.

The present firm is owned 51% by the Messerschmitt group, 2% administered by the Federal Republic as a trustee, and the remainder owned by the Bavarian State Government. While we did not meet Willy Messerschmitt, who was otherwise engaged, our hosts were Director Siegfried Keller and Director Hubert Bauer. A lengthy discussion period brought out the salient points of company operations and left no doubt that a shrewd and informed staff is at the helm of this rapidly re-emerging giant of the aircraft industry.

Suez Canal Co.

One of the phenomena of the investment world has been the uncanny ability shown by the Suez Canal Company in realigning itself into a skilled and far-flung capital management team in the few short years since the canal nationalization in 1956.

Those who experience, at first hand, the manifold problems of setting up a diversified portfolio of listed American securities alone, can appreciate the complications of scanning the world's economic horizon in order to select a properly balanced group of investments.

The enunciation of investment doctrines as set out by M. Michel Caplain, General Manager for the Board of Directors, afforded a clue as to the reasons for the success achieved to date by the company.

The periscope on the world's markets afforded by the company's unique position, and the vast experience in international finance accumulated over the 100-odd years since the original canal concession was granted to Ferdinand de Lesseps, has been translated into effective capital investment by a board which comprises on its roster a direct descendant of the original de Lesseps.

The present Compagnie Financiere de Suez, owns important banking and financial interests. The bulk of its other assets are held through Societe d'Investissements Mobiliers, which in turn owns a diversified list of holdings. As of the end of 1960, investments were scattered through-

out France, the United States, the Netherlands, the United Kingdom, Germany and Canada. However, the growth in asset value of the SIM shares has widely outperformed the composite indexes of the Paris Bourse, the Dow-Jones Industrials, and the Amsterdam and London Stock Exchanges. From what we saw of management planning for the future, similar results may be anticipated from here on.

UNITED STATES LINES



COMPANY
Common
Stock
DIVIDEND

The Board of Directors has authorized the payment of a dividend of fifty cents (\$.50) per share payable June 9, 1961, to holders of Common Stock of record May 19, 1961.

THOMAS R. CAMPBELL, Secretary
One Broadway, New York 4, N. Y.



1960

Southern Natural Gas tops a decade of Growth with The Industrial Southeast

1960 was a good year for the still-booming Industrial Southeast—and for Southern Natural Gas, growing along with the region. In service to our customers—in total facilities—in revenues—the year was our best to date. Here are some highlights of Southern Natural's progress in the last ten years:

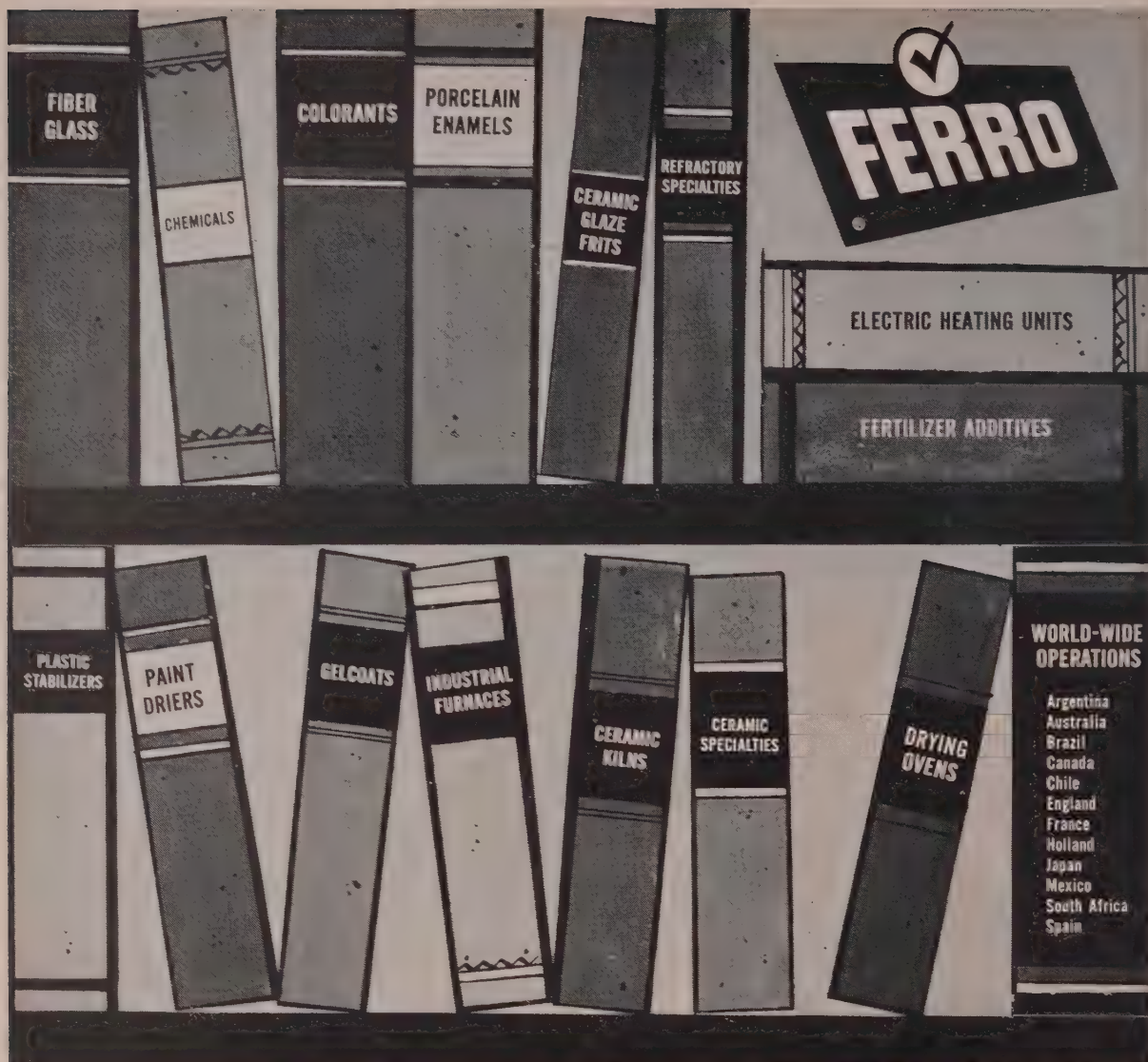
	Operating Revenues	Net Income	Dividends Paid	Daily Delivery Capacity (Million Cubic Feet)	Volume of Gas Sold (Billion Cubic Feet)
1960	\$130,986,000	\$11,299,000	\$9,927,000	1,365	356.47
1955	69,326,000	8,534,000	5,807,000	990	264.11
1950	27,136,000	5,338,000	3,344,000	506	142.04

These results indicate a ten-year increase of about 250% in pipeline delivery capacity and volume of gas—nearly 300% in dividends. It is good to see this practical justification of our investment in The Industrial Southeast, including our recently completed expansion program, costing \$100,000,000.

For a complete copy of our 1960 Annual Report, write to Department A-1

SOUTHERN NATURAL GAS COMPANY

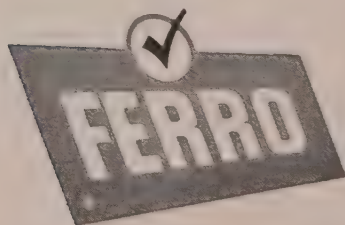
WATTS BUILDING, BIRMINGHAM, ALABAMA



*** CONDENSED CONSOLIDATED BALANCE SHEET AS OF DECEMBER 31, 1960**

ASSETS		LIABILITIES	
Cash & U. S. Securities	\$ 3,467,314	Current Liabilities	\$8,241,893
Notes & Accounts Receivable	9,026,051	Long-Term Liabilities	
Inventories	13,243,696	Due After 1961	6,831,877
Other Current Assets	1,075,867	Other Liabilities & Reserves	927,141
Current Assets	\$26,812,928	Shareholders' Equity	31,228,823
Other Assets, Including Investments, Property, Etc.	20,416,806		
	<u>\$47,229,734</u>		<u>\$47,229,734</u>

*Annual Report is Available on Request



FERRO CORPORATION

4150 EAST 56TH ST. • CLEVELAND 5, OHIO

Financial Analysts Meet European Bankers

by John Hinkle

Chemical Bank New York Trust Co.

(Editor's note: The following observations are limited to banks visited by the Financial Analysts on the "southern" tour).

MEETINGS arranged by European bankers included a dinner given by the Deutsche Bank in Munich, visits to stock exchanges in Munich, Vienna, and Zurich, and meetings with the managements of Oesterreichische Laenderbank and Creditanstalt Bankverein. A talk by Dr. Walter Kull, a director of the Swiss National Bank was followed by a question and answer period. There were also meetings with the managements of Credit Suisse, Union Bank of Switzerland, and Swiss Bank Corp., and a luncheon in Lucerne given by the three banks. Probably the gayest gathering was a "heuri-genparty" at Stift Klosterneuburg, near Vienna, given by the Association of Austrian Banks and Bankers. Arrangements everywhere were on a generous scale and carefully planned.

There were also frequent occasions to meet with men doing research, stock brokerage, and other functions in banks. These contacts were always pleasant and often productive of background information and informed opinions.

Without attempting to give a full description of banking on the Continent one might point out a few contrasts with banking in the United States. The big public banks abroad are nationwide in their operations, few in number, and, relative to the United States, larger in proportion to the national economy. They have direct memberships on the stock exchanges and do an active securities brokerage business for their own account and for their clients.

There are also a good number of family controlled private banks, some of international scope. Both types of banks have substantial equity investments and have control

or important influence in numerous corporations. They have solid research departments and keep informed on both company affairs and general economic and political developments. The managements have intelligent, well-informed outlooks. It might be mentioned, however, that they were much less eager to draw on our knowledge than we were to obtain information and opinions from them.

The following information and opinions, selected at random, were noted at various bank meetings. European shares are as high priced as U. S. shares except that the growth rate may continue at a higher rate there. Inadequate reporting abroad of income and expense items is partly the result of a desire not to show wide fluctuations in net earnings. Depreciation rates permitted by taxing authorities are generous. We heard of a building written off in two years. Some financial and industrial interests in the United Kingdom and Austria favor joining the European Economic Community. Among the steps taken to stop the inflow of funds to Switzerland

are a one percent per annum charge for demand deposits and a ban on foreign investments in Swiss securities and real estate.

Interest rates of eight to ten percent on secured loans were mentioned in Germany and Austria. The Austrian Government owns 60% of shares of Oesterreichische Laenderbank and Creditanstalt-Bankverein. The former has capital and reserves equal to 13% of liabilities and the latter 18%. Vienna bankers consider Austrian industry to be in a much sounder financial position than it was between the two World Wars. One out of five persons employed in Switzerland is a foreigner not permitted to acquire citizenship. These workers save most of their money and add little to the demand for consumer goods. Nestle is the largest industrial concern in Switzerland.

A few excerpts from Dr. Kull's address were available just prior to going to press. They follow:

"For years the Swiss economy has been in a state of high activity. Month after month, production and turnover figures are reaching record levels and incoming orders in industry exceed output. The upward impulse is being fostered by large investments, by a lively demand for export goods and, thanks to the high purchasing power of the general public, by a heavy demand for consumer goods. . . .

"The degree to which Switzerland's economy interlocks with that of other countries is even higher in respect of *foreign trade* than it is with regard to the labour market. Swiss exports, amounting in 1960 to more than 8 billion francs, play a most important role in our economy. Compared with the previous year, there was an increase of 860 million or almost 12%, attributable in the main to a growing volume of exports in the engineering, chemical and watch industries. However, the



Mr. Erich Manhardt, general director of the Central Bank of the People's Bank of Austria, left, is shown talking on the floor of the Vienna Stock Exchange with John Hinkle, of New York's Chemical Bank New York Trust Co. The People's Bank has 160 branches within Austria.



Mr. Ernst Matthiensen, general manager of Dresdner Bank AG, was host at a Munich reception. He is stationed at Frankfurt, West Germany.

ratio of growth in respect of imports is bigger still. Imports amounted to over 9.6 billion francs last year, the increase within the year being 1.4 billion francs or 17%. Quite outstanding was a 30% growth in imports of raw materials bringing the total to about 3 billion francs, and this despite the fact that the prices for basic raw materials had shown a downward tendency.

"The importation of machinery, instruments and apparatuses increased by roughly one quarter which points to great activity in investments. A certain shifting in favour of American goods was noticeable, as far as imports as a whole are concerned. It was with Western Germany that Switzerland did most of her trade. 29% of all our imports emanated from Western Germany who, in turn, absorbed 18% of the total of our exports. With regard to the United States, we imported from them goods to the value of more than 1 billion francs and exported to them goods to the value of approximately 800 million francs. During the first three months of 1961, both imports and exports have further increased appreciably.

"The surplus in imports, characteristic and traditional for Swiss foreign trade, amounted in 1960 to roughly 1.5 billion francs, thus exceeding by 50% the figure of a year previously. The deficit of the trade balance, however, is being more than offset by receipts from the tourist trade, by income on capital

and on services, so that the *balance of payments on current account* (excluding movements of capital and gold) is expected to show a surplus of approximately 200 - 300 million francs for last year. . . .

"The *Federal Budget* is characterised by rising receipts and rising expenditure. For some years now, the budget of the Confederation has shown surpluses, amounting in 1960 to not less than 715 million francs or 23% of total receipts. In view of this favourable financial position it is not surprising that for years there have been no new loan issues by the Confederation on the market. The sterilisation of these surpluses had a marked anti-inflationary effect. . . .

"The Swiss franc is one of the hardest currencies in the world. From the international point of view it enjoys unqualified confidence. Just two figures will illustrate the strong position of the Swiss franc: The note circulation amounts to roughly 6.4 billion francs. At the same time, gold holdings of the National Bank are at a level of roughly 9.4 billion francs. In other words, Swiss bank notes in circulation are covered by gold to the extent of almost 150%."

Analysts' Itinerary

(Editor's note: While many of the European trips have been discussed in some length elsewhere in this issue, following is the complete list of companies visited during the 23-day visit of The National Federation of Financial Analysts Societies, covering nine countries. It should be noted that all 85 Financial Analysts were together in London and Paris. The group split after six days in London, one going "north" and the other to the "south" of Europe).

LONDON: (1) Overnight trips: John Summers & Sons Ltd.; Vickers Ltd.; Associated Electrical Industries; Beecham Group Ltd.; British Motor Corp.; Dunlop Rubber Co. Ltd.; Jaguar Cars, Ltd.; Tube Investments Ltd.; and United Steel Companies. Day Trips: Electrical & Musical Industries Ltd.; Imperial Tobacco; Rank Organization; Bowater Paper Corp.; International Computers & Tabulators; Marks & Spencer Ltd.; Rolls Royce Ltd.; Courtaulds; Great Universal Stores; Imperial Chemical Ind.; Plessey Co. Ltd.; Rio Tinto; Schwepes, Ltd.; and Elliott Automation.

Then, one group visited the following:

COPENHAGEN: Danfoss; East Asiatic Co.; and Bing & Grondal. STOCKHOLM: SKF; Atlas Copco; Volvo; Electrolux; ASEA; and L. M. Ericsson. DUSSELDORF: Farbenfabriken Bayer; Mannesmann; Vereinigte Glanzstoffwerke; August Thyssen-Hütte; Demag; and Rheinische Stahlwerke. BRUSSELS: Cockerill Ougree; Union Minière; Sofina; Petrofina; A.C.E.C.; Cimenteries et Briqueteries Reunies; Union Chimique; Vieille Montagne; Photo Gevaert; Papeteries de Belgique; Union Cottonniere; Universal (Zeebrugge Glass Cy); Innovation; Banque Societe Generale; Banque de Bruxelles; Kredietbank; Societe Belge de Banque; and European Economic Community.

The second group, on leaving London, visited the following:

AMSTERDAM: Hoogovens; Royal Dutch; Unilever; and Philips.

MUNICH: Siemens-Halske; MAN; Messerschmitt; Krauss-Maffei; Deutsche Bank; and Dresdner Bank.

VIENNA: Oesterreichische Laenderbank; Creditanstalt - Bankverein; Semperit - Gummiwerke; and Voelzlauer-Kammgarnwerke.

ZURICH: Credit Suisse; Union Bank, and Swiss Bank.

Both groups met in Paris and visited the following: Machine Bull; Schneider; Simca; St. Gobain; Massey-Ferguson; Suez; Pechiney; Kuhlman; Air Liquide; and Sidelor.

GARDNER DENVER

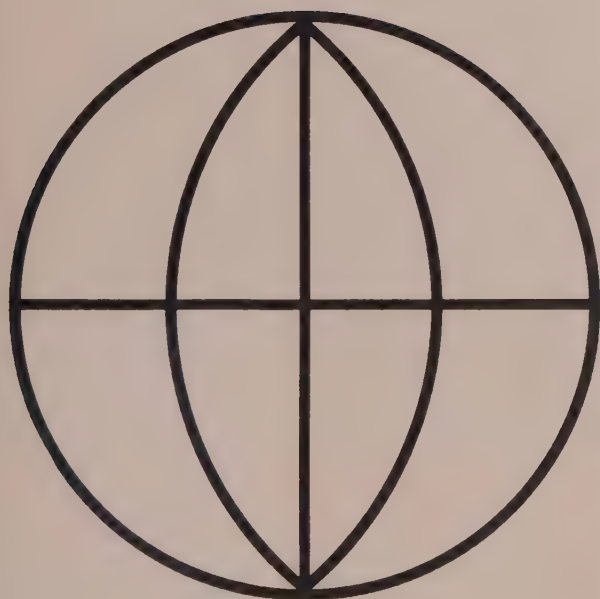


108th CONSECUTIVE DIVIDEND

ON COMMON STOCK

A quarterly dividend of \$.50 per share on the common stock of Gardner-Denver Company has been declared by the Board of Directors of the company, payable June 1, 1961, to stockholders of record at the close of business on May 10, 1961.

Quincy, Illinois O. C. Knapheide, Jr.
April 13, 1961 Secretary



**In eight countries,
on four continents**

A WORLD OF GROWTH IN 1960

**... and Ohio Oil grew fastest
in Libya, North Africa**

Around the world in 1960, Ohio Oil explorers were probing for oil in eight countries on four continents. Of 510 wells drilled in exploration and development, 406 were productive.

In the Libyan concessions in which the company holds one-third interest, it became clear that the Dahra Field is substantial in size . . . containing reserves large enough to warrant building a pipeline to the Mediterranean. And significant new discoveries were made.

In the U. S., Ohio Oil's crude oil production and refined products sales were at record high levels. Its increase in gasoline sales over 1959 was more than five times greater than the industry average.

Write for your copy of Ohio Oil's seventy-third annual report. You'll find this progress translated into barrels, dollars and cents. Write to
The Secretary, Dept. J,
The Ohio Oil Company, Findlay, Ohio.



IN BRIEF	1960	1959
Total Revenues	\$357,778,000	\$349,473,000
Capital Expenditures	61,764,000	52,367,000
Exploration Expense	31,010,000	31,920,000
Net Income	39,215,000	38,633,000

THE OHIO OIL COMPANY

Producers • Transporters • Refiners
Marketers of **MARATHON** and **SPEEDWAY 79**
Petroleum Products



NATIONAL DISTILLERS... *expanding in polyethylene...a growth industry*

Last year American industry marketed almost 1¼ billion pounds of polyethylene resins here and abroad . . . more than 13 times the 90 million pounds sold only 9 years ago. National, through its U. S. Industrial Chemicals Division plants in Houston, Texas, and Tuscola, Ill., is a leading producer of this most-used plastic raw material.

To meet increasingly varied industrial demands, U.S.I. tailors its PETROTHENE® polyethylene resins to meet specific end-use needs. Nearly 100 variations of 36 basic low and medium density resins were sold last year. These found such diverse applications as quality housewares, vegetable and fruit bags, lightproof photographic film packages, overwrap for

soft goods, plastic bottles and toys. Other uses included automobile door liners, containers, reactor shielding, closures, agricultural mulch and grease-proof coating for paper and paperboard.

The Company has announced the construction of a new plant for the production of high density polyethylene, the fastest growing member of the polyethylene family.

As new markets develop in the ever-expanding plastic field, National will be ready to meet demand through its continuing research and development program. Growth in polyethylene is just one phase of the Company's broad program of expansion in plastics, industrial chemicals, fertilizers and metals.



NATIONAL DISTILLERS and CHEMICAL CORPORATION

NEW YORK 16, N.Y.

THE COMPANY WITH THE FIVE INDUSTRY FUTURE
LIQUORS • INDUSTRIAL CHEMICALS • PLASTICS • FERTILIZER CHEMICALS • METALS

DENMARK and SWEDEN

by Frances Haidt*

MORE THAN one hundred years ago, the poet N. F. S. Grundtvig described his native Denmark as a country "where few have too much and fewer too little." This is even truer today. The few have much more, but no one has too little. In Sweden, one bank (a family bank) has controlling interest not only in the four major industrial companies which we visited, but in most of the other principal enterprises. On the other hand, in both Sweden and Denmark, there are no poor people. Everyone is well-housed, well-fed and well-clothed.

The wholesome living standard in Scandinavia was pleasantly surprising. The generous corporate tax structure was shocking and frustrating. Though their corporate income tax rates are comparable to our own, there are special regulations covering inventory write-offs, depreciation allowances and reserve deductions which enable companies to build up sizeable cash flows.

Liberal Depreciation Rules

For example, inventories can be valued down to 40% of cost or market, whichever is lower. Sweden's depreciation rules are probably the most flexible and liberal anywhere. A corporation may write-off the entire cost of its machinery and equipment in five years, with 50% of the investment taken in the first two years. At their own discretion, a company can also set aside up to 40% of their pre-tax net business income as an "investment reserve for economic stabilization." While 46% of this amount must be deposited to the corporation's account at the Bank of Sweden, 54% remains with the company as additional working capital.

Further, where a company sets up

a pension fund for its employees, it can freely choose to allocate non-taxable amounts to this fund. These payments need not be in the form of cash to be deductible. They may be made in the form of company notes, so that in effect these funds remain with the business and give it further liquidity.

On first blush surely, never did "creeping socialism" look so good. These provisions do act as an incentive and stimulate corporate capital investment in productive machinery and equipment. In large part they account for the quality of Sweden's industrial plant, and the fact that productivity per industrial worker is far higher in Sweden than in other European countries despite their higher wage scales.

'Hedge' Against Unemployment

It should be recognized however, that these unique tax rules represent a deliberate effort on the part of a Social Democratic Government to regulate its economy and to protect employment against business fluctuations. The tax-free investment reserves were designed to be used to fight recessions. The proportion of these reserves deposited with the National Bank can be spent only on the authorization of the Labor Market Board when it determines the economic or employment situation so warrants.

More important — especially for those of us in the financial world —

the effect of these seeming stimulants to private capital, is to transfer the capitalistic function of raising investment monies from the banks and securities markets to that of the corporation itself. The self-generation of funds for future expansion by companies can only be at the expense of public financing and new issues. Further encouragement in this direction would result, as it does in Scandinavia, in a further concentration of wealth in the hands of the few presently in control — rather than to a broadening of corporate ownership and expansion of "democratic capitalism."

Consequently the equity markets in Sweden and Denmark are virtually non-existent. Transactions on the Copenhagen Stock Exchange are primarily in municipal and government bonds. Though there is a market for common stocks in Stockholm, the supply of shares are limited. New issues are not made to raise money for expansion of new business, but represent partial sell-offs by management to raise personal funds for further private enterprises.

Also disturbing to the American Financial Analyst seeking investment opportunities in this area, was the fact that Government red tape makes it virtually impossible for a corporation to make a bond offering. Then too, most of the leading companies (especially in Denmark) are privately owned, and have no intention of going public. And in those instances where there are public shares, Government regulations forbid an American to purchase Swedish or Danish shares, except under rare circumstances when an individual American can prove compelling reasons of the most urgent and unusual kind (and this requires

■
'Where's Picadilly Circus?— or some such place,' these Financial Analysts are asking a London policeman ("Bobby"). From left to right: Frances Haidt, the "Bobby," Millie Sorentino and Donald H. Randell. Photo was taken in London's Petticoat Lane.



* Director of Research, Herzig, Farber & McKenna.

Government approval which takes some two years to obtain).

The only way for Americans to invest in the attractive growth companies of Scandinavia is to attempt to obtain the few (very small number indeed) shares of some of these companies which found their way into the London, Paris, Zurich and now New York markets during the pre-Socialist days.

As a result, this small quantity of "outside" shares sell at a substantial premium over local stock. For example on the day a group of our Analysts visited with Ericsson Telephone Company, its stock was selling at 26 per share on the Stockholm Exchange and quoted at 36 bid in the New York over-the-counter market.

Outlook Is Bright

This lack of investment opportunity is particularly distressing in view of the anticipated and continued growth of the industrial activity and economy in these two countries. In fact these two member nations of the "Outer Seven" (European Free Trade Association) appear to be on the verge of an expansion similar to that which followed the Analysts' first trip to the European Common Market countries two years ago.

The key to their economic growth

at present lies in increased capital expenditures, estimated to increase 15-20% this year. This expansion of industrial plant and equipment will come on top of heavy Government outlays for housing. In an area where there are no slums, housing construction is expected to rise 10-15%. Accommodations are being upgraded; people are moving into larger apartment units; and the young people are leaving home earlier and setting up for themselves, and/or getting married at younger ages.

Paralleling this construction boom, will be an increase in the consumer goods industries reflecting a substantial rise in consumer buying power. Disposable personal income after taxes is about 10% higher than it was last year. Consumer prices are expected to rise only 2%, so that the increase in income of about 8% will be real.

To a large extent, wage increases have been responsible for this. The hourly wage for male industrial workers in Sweden was raised 7% in August 1960 and is the highest in Europe today.

On the other hand, industrial production has risen four or more times as rapidly as wage scales since 1949. This rising productivity explains the true increase which has taken place

in the gross national income of these two countries. Again this is illustrated by the fact that agricultural production in Denmark rose over 30% in this period while the agricultural labor force declined 15%.

In 1960, industrial investments in these countries rose by 8-10%, consumption went up by 5% and exports some 15%. In spite of this rapid expansion, the price level remained relatively stable and gold and foreign exchange reserves declined only slightly. According to all available statistical data and physical evidence to which our visiting Analysts can attest, Sweden and Denmark seem to be enjoying almost ideal states of business with growing production, full employment and practically stable prices. A continued increase in demand and production is forecast.

As previously indicated, a sizeable upswing is expected in capital expenditures and in the purchase of consumer durables. More important since these two nations are historically dependent on international trade, the developments in their export markets are also promising. While the ordinary iron and steel markets are still uncertain, Swedish steel works are expected to more than hold their own because of their high quality product. These techni-

STANDARD BRANDS

Incorporated

COMMON STOCK DIVIDEND

The Board of Directors declared a quarterly dividend of 40c per share payable June 15, 1961 to stockholders of record on March 15, 1961.

PREFERRED STOCK DIVIDEND

The Board also declared a dividend of $87\frac{1}{2}$ c per share payable June 15, 1961 to stockholders of record on June 1, 1961.

Joseph H. Hoyt
Treasurer

April 27, 1961



GENERAL PORTLAND CEMENT COMPANY

Common Stock Dividend.

The Board of Directors of General Portland Cement Company has this day declared a quarterly dividend upon its Common Stock of 30 cents per share, payable June 30, 1961 to stockholders of record at the close of business on June 9, 1961. The stock transfer books will remain open.

HOWARD MILLER,
Treasurer

April 25, 1961



OUTBOARD MARINE CORPORATION

DIVIDEND NOTICE

A cash dividend of twenty cents (20c) per share on the Common Stock of the Company has been declared by the Board of Directors, payable May 25, 1961, to stockholders of record May 5, 1961.

R. F. WALLACE, Secretary

April 20, 1961

cally proficient men at work, seem to be true sons of Thor.

A further rise in export volume is foreseen for iron ore and pulp from Sweden. From personal tasting, we can testify to the superiority of Danish dairy products and their ready market in England. The wives of our members already "guaranteed" this year's export quota of china, silver and teak crafts from Copenhagen.

The only cloud on the horizon (that is, the only uncertain factor in the generally optimistic appraisal of the economic prospects of Scandinavia) is the outlook of the business situation in the United

States. The United States is an important export market for this area, and any deepening of last year's recession would be bound to have an effect on their economies. But indications at home are now brighter. Thus, the signs seem to point for greater prosperity for the next few years to these hard-working and good-living people of the North.

Our only regret is that conditions do not permit our participating in their future growth through equity investments. Perhaps we would do better to concentrate on getting some of the few with the great wealth to invest in United States securities.

Philip K. Anthony
Investment Analyst
Kuhn, Loeb & Co.
30 Wall Street
New York 5, N. Y.

Ralph S. Anthony, Resident Manager
Francis I. duPont & Co.
Howard Bldg., Providence 3, R. I.

Joseph F. Benning, Jr.
Assistant Secretary
Chemical Bank-New York Trust Co.
100 Broadway
New York 15, N. Y.

Mr. & Mrs. Franklin Bickmore
Investment Analyst
Boettcher & Co.
135 S. La Salle Street
Chicago 3, Illinois.

Mr. & Mrs. George W. Blauvelt
Officer
The National City Bank of Cleveland
623 Euclid Avenue
Cleveland 1, Ohio

Warren Burns, Managing Editor
The Financial Analysts Journal
82 Beaver Street
New York 5, N. Y.

Leo I. Burrington, Investment Analyst
Van Strum & Towne, Inc.
85 Broad Street
New York 4, N. Y.

Mr. & Mrs. Glenelg P. Caterer
Investment Counselor & Past President, New York Society of Security Analysts

Lionel D. Edie & Co., Inc.
530 Fifth Ave., New York 36, N. Y.

Mr. & Mrs. H. Philip Chapman, Jr.
Investment Analyst
Springfield-Monarch Insurance Cos.
1250 State Street
Springfield, Mass.

James Cooney
Investment Analyst
Lord, Abnett & Co.
63 Wall Street
New York 5, N. Y.

(continued on next page)

TRIP MANIFEST

(continued from page 65)

Mr. & Mrs. John Leary
Investment Analyst
Gartley & Associates
84 William Street
New York 38, N. Y.

Mr. & Mrs. Arthur M. Leinbach
Investment Analyst
Kidder, Peabody & Co.
17 Wall Street
New York 5, N. Y.

Herbert Muller, Investment Analyst
Lehman Brothers
One William Street
New York 4, N. Y.

Aaron M. Nadler
19 Rector Street
New York 5, N. Y.

Mr. & Mrs. Abbott Oberndorfer
Investment Analyst
6 East 45th Street
New York 17, N. Y.

Mr. & Mrs. Winfield H. Perdun
Partner
Faulkner, Dawkins & Sullivan
51 Broadway Street
New York 4, N. Y.

John W. Pope, Investment Analyst
407 S. Dearborn Street
Chicago, Ill.

Mr. & Mrs. Edward H. Potter
Partner
Neuberger & Berman
120 Broadway
New York 5, N. Y.

Mr. & Mrs. David Rosenberg
Partner
Naess & Thomas
Two Broadway
New York 4, N. Y.

Stanley Z. Scott
Istel, Lepercq & Co., Inc.
63 Wall Street
New York, N. Y.

Harry Seggerman
Investment Analyst
Capital Research Co.
900 Wilshire Blvd.
Los Angeles 17, Calif.

Mr. & Mrs. E. M. Spencer
Investment Analyst
The Detroit Edison
2000 Second Ave.
Detroit 26, Mich.

Walter P. Stern, Partner
Burnham & Co.
15 Broad Street
New York 5, N. Y.

Mr. & Mrs. Paul W. H. Trevor
Partner
Lord, Abnett & Co.
63 Wall Street
New York 5, N. Y.

Rudolph L. Weissman
Investment Analyst
W. E. Hutton & Co.
14 Wall Street
New York 5, N. Y.

Merle S. Wick
Asst. Director, Dept. of Stock List
New York Stock Exchange
11 Wall Street
New York 5, N. Y.

Mr. & Mrs. Louis J. Zitnik, Partner
Mitchum, Jones & Templeton
650 S. Spring Street
Los Angeles 14, Calif.

* * *

Trip B

Following are the Financial Analysts and wives who visited Amsterdam, Munich, Vienna and Zurich. Both groups met in Paris.

Mr. & Mrs. David Adams, IV
Pension Fund Manager
Bethlehem Steel Co.
Bethlehem, Pa.



COMMON STOCK DIVIDEND

The Board of Directors of Central and South West Corporation at its meeting held on April 18, 1961, declared a regular quarterly dividend of twenty-five and one-half cents (25½ c) per share on the Corporation's Common Stock. This dividend is payable May 31, 1961, to stockholders of record April 28, 1961.

LEROY J. SCHEUERMAN
Secretary

**CENTRAL AND SOUTH WEST
CORPORATION**
Wilmington, Delaware

Mr. & Mrs. Nicholas E. Crane
Investment Analyst, Past President,
N. Y. Society of Security Analysts
Dean Witter & Co.
14 Wall St., New York 5, N. Y.

Mr. & Mrs. George A. Easley, Jr.
Investment Analyst-Limited Partner
Mitchell, Hutchins & Co.
One Wall Street,
New York 5, N. Y.

J. Marion Engler, Officer
St. Louis Union Trust Co.
510 Locust Street
St. Louis 1, Mo.

Mr. & Mrs. Charles E. Exley
Executive Vice President
Charles A. Parcels & Co.
639 Penobscot Bldg.
Detroit 26, Mich.

Anthony Gaubis, President
Anthony Gaubis & Co.
122 East 42nd Street
New York 17, N. Y.

Mr. & Mrs. W. W. Graves, Jr.
Partner
Investment Counsel Service
Guilford Bldg.
Greensboro, N. C.

R. T. Heard, Investment Analyst
Audior Co.
2013 H Street, N.W.
Washington 6, D. C.

Mr. & Mrs. Frederick A. Hesse
Assistant Secretary
Empire Trust Co.
20 Broad Street
New York 5, N. Y.

Mr. & Mrs. John Hinkle
Investment Analyst
Chemical Bank-New York Trust Co.
30 Broad Street
New York 15, N. Y.

LeRoy R. Hoffman, Jr., Officer
Ohio Farmers Insurance Co.
LeRoy, Ohio

Mr. & Mrs. Alan Kirschberg
Investment Analyst
Carl M. Loeb, Rhoades & Co.
42 Wall Street
New York 5, N. Y.

Robert W. M. Kohlsdorf
Vice President
Mercantile Trust Co.
721 Locust Street
St. Louis 1, Mo.

Mr. & Mrs. William A. Kugler
Investment Analyst
New England Mutual Life Ins. Co.
501 Boylston Street
Boston 17, Mass.

Mr. & Mrs. Leo J. Larkin
Investment Analyst
Carl M. Loeb, Rhoades & Co.
42 Wall Street
New York 5, N. Y.

Jacob A. Lempenau, Financial Writer
The Income Builder
River Edge, N. J.

Mr. & Mrs. James G. Long
Investment Analyst
Smith, Barney & Co.
Philadelphia National Bank Bldg.
Philadelphia 7, Pa.

Mr. & Mrs. David S. Loveland
Investment Analyst
United Business Service
210 Newbury Street
Boston 16, Mass.

Mr. & Mrs. John Lowell
Vice President
Boston Safe Deposit & Trust Co.
100 Franklin Street
Boston 6, Mass.

Mr. & Mrs. Willard H. Marsh, Officer
Denver-United States Natl. Bank
1740 Broadway
Denver 17, Colo.

Mr. & Mrs. David H. Morey
Senior Vice President
Boatmen's National Bank
300 N. Broadway
St. Louis, Mo.

Mr. & Mrs. Joseph S. Nye
Senior Partner
Nye & Whitehead
44 Wall Street
New York 5, N. Y.

Edward B. Ory, Managing Partner
Commercial Enterprises
179 East 70th Street
New York 21, N. Y.

George E. Ostrom, Senior Partner
George E. Ostrom & Co.
203 Beal Bldg.
Duluth 2, Minn.

Robert R. Pierce, Investment Analyst
New York Central Mutual Assn.
Room 2234, 55 Public Square
Cleveland 13, Ohio

Mr. & Mrs. Alan C. Poole
Investment Analyst
Co-Chairman of European Trip
Hemphill, Noyes & Co.
15 Broad Street
New York 5, N. Y.

Donald H. Randell
Investment Analyst
E. F. Hutton & Co.
61 Broadway
New York 6, N. Y.

Joseph E. Refsnes, Partner
Refsnes, Ely, Beck & Co.
1814 Palm Croft Drive N.E.
Phoenix, Arizona

Lawrence Rubin, Investment Analyst
Scudder, Stevens & Clark
10 Post Office Square
Boston 9, Mass.

Mr. & Mrs. Lewis L. Schellbach
Senior Vice President
Standard & Poor's Corp.
345 Hudson Street
New York 14, N. Y.

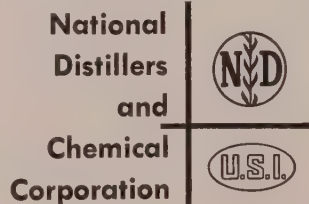
Mr. & Mrs. Harold X. Schreder
Executive Vice President
Distributors Group, Inc.
80 Pine Street
New York 5, N. Y.

Mr. & Mrs. Elmer M. Shankland
Financial Editor, Forbes, Inc.
70 Fifth Avenue
New York 11, N. Y.

Mr. & Mrs. Edward H. Terviz
Investment Analyst
Glore, Forgan & Co.
45 Wall Street
New York 5, N. Y.

Mr. & Mrs. E. C. Villere
Senior Partner
St. Denis J. Villere & Co.
552 Natl. Bank of Commerce Bldg.
New Orleans 12, La.

Mr. & Mrs. Edward S. Wilson
President, New York Society of
Security Analysts
W. E. Burnet & Co.
80 Pine Street
New York 5, N. Y.



DIVIDEND NOTICE

The Board of Directors has declared a quarterly dividend of 30¢ per share on the outstanding Common Stock, payable on June 1, 1961, to stockholders of record on May 11, 1961. The transfer books will not close.

PAUL C. JAMESON

April 27, 1961. Treasurer

Pacific Gas and Electric Company

DIVIDEND NOTICE COMMON STOCK DIVIDEND NO. 181

The Board of Directors on March 22, 1961, declared a cash dividend for the first quarter of the year of 70 cents per share upon the Company's common capital stock. This dividend will be paid by check on April 15, 1961, to common stockholders of record at the close of business on March 30, 1961.

K. C. CHRISTENSEN,
Vice President and Treasurer
San Francisco, Calif.

P·G·and·E·



New, highly maneuverable WHITE COMPACT meets urgent need for lower cost, heavy-duty, urban and suburban hauling.



New Oliver 1800 row-crop tractor shown with new Oliver semi-mounted plow is setting fuel-economy records.

New Products...New Markets

THE WHITE MOTOR COMPANY PROGRESS REPORT

For The White Motor Company, the year 1960 was one of significant progress. Although sales turned downward as a result of the slower demand for trucks, both sales and profits were still higher than in any year except 1959.

In the fall, WHITE introduced a unique new line of heavy-duty trucks — the WHITE COMPACTS. These models, now in strong demand, are opening up new markets and new accounts for WHITE.

Since its acquisition of the Oliver

farm-equipment business on October 31, 1960, WHITE is actively engaged in making and selling Oliver products to farm and industrial markets.

With new products and broader markets, WHITE now faces greater growth and profit opportunities.

THE WHITE MOTOR COMPANY
CLEVELAND 1, OHIO

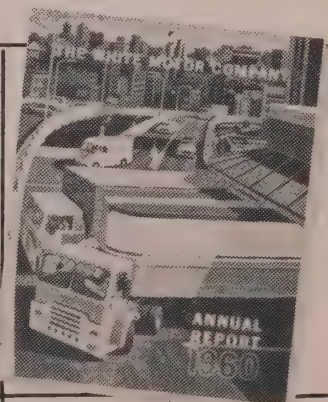
WORLD LEADER IN HEAVY DUTY TRUCKS
WHITE TRUCKS

WHITE HIGHLIGHTS	1960	1959
Net sales	\$282,695,718	\$333,101,125
Net income	8,875,813	14,209,244
Cash dividends paid on common stock	4,549,216	3,745,734
Net income per share of common stock	3.87(1)	6.62 (2)
Dividends paid per share of common stock	2.00	1.875 (3)

(1) Based on weighted average of outstanding shares, giving effect to 655,000 shares issued in connection with acquisition of Oliver farm equipment business as of October 31, 1960.

(2) Adjusted for 5% common stock dividend distributed in January, 1960.

(3) Adjusted for two-for-one common stock split 1959.



For your copy of the White Annual Report . . . write to:
Treasurer, The White Motor Company, Cleveland 1, Ohio

Looking Ahead with Phillips Petroleum...

Top New Rubber Achievement — “Better-than-natural” CIS-4*



Cis-4, Phillips new polybutadiene synthetic rubber, is used by tire makers as a superior replacement for much natural rubber in heavy-duty tire treads.

“We have searched for years for a synthetic rubber that would perform as well or better than natural without sacrificing the low heat build-up of natural. It looks like Cis-4 does the trick.”

This statement by a leading rubber company executive dramatizes the great significance of Phillips newest commercial achievement in petrochemicals.

Cis-4 is destined to replace large amounts of natural rubber in tire treads, especially for the punishing service of heavy duty truck and bus tires. Heretofore, SBR (styrene-butadiene) synthetic rubber has not been usable for this service because of heat build-up problems. Cis-4 not only is at least as cool-running as natural rubber, but additionally is superior to natural in tread wear.

Tires with treads made from blends of Phillips new Cis-4 (*cis*-polybutadiene) and natural rubber have bested those of 100% natural rubber, of which polyisoprene is the synthetic replica, in tests totaling millions of miles. And with proper compounding, treads can be made entirely of Cis-4, for even longer wear.

Cis-4, and its mixtures with natural rubber, consistently show high resilience and resistance to abrasion, aging, and blowout, as well as low heat build-up and very long wear. Moreover, Cis-4 advantageously utilizes more carbon black and processing oil than natural rubber, thus reducing costs of finished rubber compounds.

Phillips new Cis-4 plant at Borger, Texas, adjacent

to the company's other synthetic rubber facilities, has an annual capacity of 25,000 long tons. Cis-4 is made wholly of butadiene, also long manufactured by Phillips from the company's own basic raw materials.

Cis-4 is a link in a long chain of Phillips rubber developments, reaching back before World War II, which includes “cold” synthetic rubber and furnace oil carbon blacks. The latter two enabled SBR synthetic to replace natural in a large portion of the postwar market.

Now the favorable properties of Cis-4 will enable it to replace even more natural rubber. And, of course, Cis-4 has similar advantages over man-made polyisoprene, the synthetic duplicate of natural rubber. Phillips, however, has developed a new process for making isoprene, and a low-cost means of converting it to polyisoprene rubber.

It is expected, too, that as more experience is gained in compounding and processing Cis-4, it will move from a minor to a major role in some old-line SBR synthetic markets, such as premium passenger car tires and, ultimately, general-purpose uses. Most likely this role will be to improve rather than replace SBR.

Cis-4 again exemplifies how a policy of “looking ahead” through aggressive research and prudent acquisition of crude oil and natural gas reserves has placed Phillips in a favorable position for continuing growth and earnings.

*A trademark

PHILLIPS PETROLEUM COMPANY, Bartlesville, Oklahoma





Hawaiian Investment Conference—'Analysts in Paradise'

by Richard S. Nair

SEVERAL MONTHS OF PLANNING by a committee of *The Security Analysts of San Francisco* and many weeks of hard work on the part of a group of business and investment people in Hawaii, culminated in the flight of 84 Analysts and wives to Honolulu in February, for the Mid-Pacific Conference.

The 10-day meeting (plus a two-day bonus—courtesy of the striking flight engineers) proved to be most interesting and informative, with every aspect of the Hawaiian economy included in the complete schedule of events prepared by the *Investment Society of Hawaii* and top executives of leading Hawaiian companies. The trip was made that much more worthwhile thanks to the warm and gracious hospitality of our Island friends and "hosts" in the 50th State's true spirit of "Aloha."

Activities of our first Saturday evening and Sunday offered an opportunity to meet with the business and investment people participating in the program, on a social and informal basis, and allowed us to get a feeling for life in the Islands. The Saturday night welcoming cocktail party and Sunday evening *luau* provided several of our renowned economists with a chance to exchange cyclical theories with "experts" from Tahiti and Samoa although it was apparent that our members had some difficulty in keeping up with the practitioners from the South Pacific. Nevertheless, all of our group, which

also included representatives from Los Angeles, Salt Lake City, Chicago, St. Louis, and New York, were on hand for the opening business session Monday morning.

Hawaii's Governor William F. Quinn was introduced at the first morning session by James Wilkinson of Hawaiian Telephone Company. Governor Quinn extended a warm and extensive welcome to the group, stating that he trusted that we would find the Islands a State with a great deal of potential built upon a strong financial base. The remarks of the personable and capable Chief Executive of the State of Hawaii were acknowledged by Joseph F. Edelstein, gregarious President of the San Francisco Society and originator of the Hawaiian Conference. Raymond Y. C. Ho, Director of the Department of Budget and Review and Treasurer of the State of Hawaii, next discussed the State government organization with particular emphasis upon revenues and expenditures. The young, energetic Mr. Ho, a Yale Law School graduate, typified the enthusiasm for Hawaii which we were to note repeatedly, as he outlined the financial picture of Hawaii, discussed its improving bond ratings, budget surplus, and possible tax decreases.

With tourism playing such a vital role in the Hawaiian economy, the Analysts found a panel discussion on this topic extremely interesting. Moderator Frederick E. Simpich, Jr., Vice President of Castle & Cooke, Inc., outlined the expected growth of tourism from its present \$135 million to a potential of at least \$575 million by 1970. Speakers who discussed segments of this industry and outlined some of their own plans for future expansion included Richard E. Holtzman, General Manager of Sheraton-Hawaii Corporation; Charles G. Braden, General Manager of the Hawaii Visitors Bureau with its

Richard S. Nair is a Financial Analyst with Blyth & Co., Inc., San Francisco. A graduate of Bates College, Mr. Nair received a LL.B. degree from Yale Law School and attended New York University's Graduate School of Business Administration. He is a member of several state bar associations and the American Bar Association, as well as The Security Analysts of San Francisco.

increasing budget to attract more tourists; Arthur D. Lewis, President of Hawaiian Airlines, Ltd.; and Kenneth F. C. Char, Executive Vice President of Aloha Airlines.

The growing investment in harbor, highway, and airport facilities was then discussed by Harold W. Butzine, Manager of the Port of Hawaii; Melvin E. Lepine, Planning Coordinator for the Department of Transportation of Hawaii; and Rear Admiral A. P. Storrs, U.S.N., Retired, Director of the Hawaiian Aeronautics Commission. Fred W. Bennion, Executive Director of the Tax Foundation of Hawaii, served as moderator.

Outstanding Luncheon Speakers

At luncheon the three speakers were Mayor Neal S. Blaisdell of Honolulu, and the two outstanding economists of the State, Dr. James H. Shoemaker, Vice President of the Bank of Hawaii, and Dr. Thomas K. Hitch, Vice President of the First National Bank of Hawaii. Mayor Blaisdell discussed the City and County government, noted that Honolulu comprised roughly 80% of the State's population and that with a 26% increase in the past 10 years it constituted the eighth fastest growing metropolitan area in the United States.

Dr. Shoemaker outlined a breakdown of Hawaii's economic base, including the parts played by defense, sugar, pineapple, tourism, construction, and manufacturing, and predicted continued growth in most of these areas. He also stated that he foresaw throughout the Pacific higher levels in agricultural production, more industry coming in, more foreign trade engaged in, and increasing levels of air transportation and tourism.

Dr. Hitch outlined the extremely simple and manageable debt structure of the State of Hawaii, which it must be noted was all contained on a single page of a beautiful book, "The State of Hawaii's Finances," a copy of which was presented to each member of our group. Dr. Hitch predicted moderation in the boom rate of growth because some of the World War II shortages had not been overcome; but he expects still higher than average rate of growth for Hawaii in the next decade. In connection with tourism it was interesting to note that in 1960 the number of visitors coming from the West Coast increased 11%; and those from the Midwest were up 32%; while the Eastern representatives increased by 36%.

Choice of Field Trips

Monday afternoon our Analysts had a choice of two field trips. One group had a tour of some of the facilities of the Board of Water Supply of the City and County of Honolulu. Edward J. Morgan, Manager and Chief Engineer, pointed out that the Board was vitally aware of the importance of a water program to an island such as Hawaii but that it took a definite interest in the aesthetics involved, and we had an opportunity during the course of our visit to observe the beautiful settings and floral displays around many of the water facilities. This group then had a tour of Honolulu harbor with a briefing on containerization and bulk sugar operation by

John H. Scott, Vice President and Manager of Castle & Cooke Terminals, Ltd.

The second group began with a tour of the carton manufacturing facilities of Honolulu Paper Company as guests of C. T. Oliphant, President and General Manager. From here this group proceeded to the Von Hamm-Young Company, Main Office, where President James A. Pell discussed the business and prospects of this varied wholesale distributor. Items suitably displayed included dry goods and liquor. This group then spent time with F. P. Lowrey, President, at the offices of Lewers & Cooke, Ltd. Both groups then combined at the Ala Moana Shopping Center, a most impressive and beautiful development. Donald H. Graham, Jr., Vice President and Secretary of Hawaiian Land Company, discussed the financing and development of this company after which a tour of the vast shopping center was conducted.

Tuesday was devoted to sugar. The morning session was held at the Hawaiian Sugar Planters' Association with welcoming remarks made by James H. Tabor, immediate past president of the association. Mr. Tabor, who is also president of Theo. H. Davies & Co., pointed out that the industry is spending one and a half cents per income dollar on research as against one cent for the chemical industry. Dr. Leonard D. Bayer, Director of the HSPA Experiment Station, discussed highlights of Hawaii's sugar industry and enabled the Analysts to collect a full spectrum of figures, from the one ton of water necessary to produce every pound of sugar down to the 18 calories in each spoonful.

The progressive approach of the industry was noted in the use of radio-active isotopes to trace the plant cycle, work in genetics, mechanization, production of paper from bagasse pulp, and the control of insects completely by biological means through the use of parasites. Harold C. Eichelberger, Sr. Vice President of American Factors, Limited, discussed the development of Hawaii's sugar agencies and the manner in which they have provided corporate management for groups of plantations while leaving the operating phase in the hands of the various plant managers.

The second half of the morning session was devoted to the four major sugar producing companies or agencies. President Boyd MacNaughton of C. Brewer & Co., stated that since his company knows sugar it has decided to grow sugar outside of Hawaii and to expand by diversifying production and markets throughout the world. The company is working in Iran, Ecuador, and Puerto Rico and is currently negotiating to purchase the assets of Fajardo Sugar in Puerto Rico with the help of an \$18 million American loan. President Malcolm MacNaughton of Castle & Cooke, Inc., pointed out that his company is taking the food family approach, building upon its sugar, adding macadamia nuts, and negotiating to merge its affiliated Dole Pineapple and Columbia River Packers.

Further reports on various phases of the successful Hawaiian Conference appear on the following pages.

How to get useful information about Clevite Corporation

The cover of the 1960 Clevite Annual Report is a simple, minimalist design. It features the word "CLEVITE" in a bold, sans-serif font on the left side. To the right of the word, there is a vertical line, and below it, the words "ANNUAL REPORT" and "1960" are printed in a smaller font.

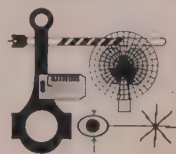
CLEVITE

ANNUAL REPORT
1960

1960 ANNUAL REPORT

12 pages
Analysis of last year's
operations
Financial and statistical data
Charts
No illustrations

Record volume of \$94,000,000
Record earnings of \$6,800,000
\$9,700,000 research program
\$9,200,000 capital expenditures
Particularly strong growth
in transistors, rubber-
metal parts, replacement
bearings, electronic
instruments
New developments in piezo-
electricity
Cash dividends for 38th
consecutive year



Services and Engineering
Division
1961

1961 OPERATIONS BOOK

24 pages
Historical background
Information on divisions
and subsidiaries
Products
World-wide operations
50 photographs

Growth through technology
9 operating units
15 manufacturing plants
Principal fields of science
and production: bearings,
electronics

If Clevite interests you, please write for copies.

16910 St. Clair Avenue, Cleveland 10, Ohio

1960

Best operational year for GULF OIL

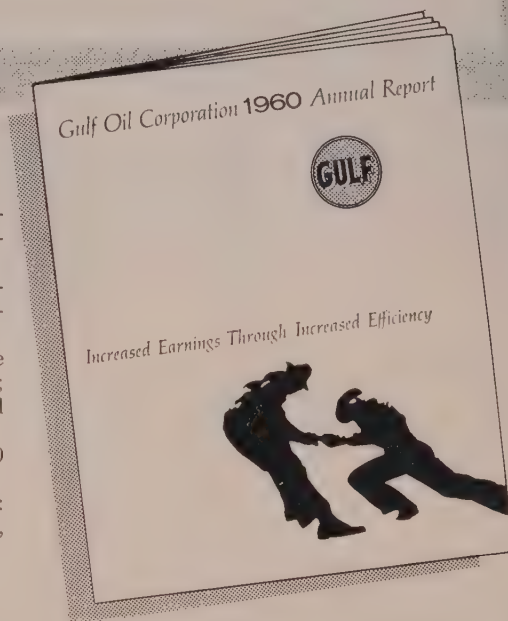
Gulf's 1960 Annual Report, recently mailed to shareholders, records net earnings of \$330,310,825—an increase of 14% over the previous year.

Contributing significantly to earnings were the Company's domestic operations which brought in \$198 million or 60% of total net income.

In all major scopes of activity, new records were established. World-wide, production was up 12.5%; crude oil processed rose 11%; and sales of refined products showed a 2.8% gain.

Financial and operating highlights of Gulf for 1960 and 1959 appear below.

If you'd like a copy of the complete Report, write to: Public Relations Department, Gulf Oil Corporation, P. O. Box 1166, Pittsburgh 30, Pa.



CONSOLIDATED FINANCIAL DATA

	1960	1959
Net Income.....	\$ 330,311,000	\$ 290,467,000
Per Share*	\$3.20	\$2.82
Cash Dividends.....	\$ 99,558,000	\$ 96,876,000
Per Share.....	\$1.00	\$1.00
Stock Dividend.....	3%	3%
Working Capital (current assets less current liabilities)....	\$ 781,185,000	\$ 690,656,000
Long-Term Debt.....	\$ 257,385,000	\$ 265,935,000
Total Assets.....	\$3,843,429,000	\$3,576,318,000
Sales and Other Operating Revenues.....	\$3,212,205,000	\$3,170,847,000
Capital Expenditures.....	\$ 346,155,000	\$ 335,771,000

*Based on the shares outstanding at the end of 1960.

OPERATIONS DATA-DAILY AVERAGE BARRELS**

Net Crude Oil and Condensate Produced.....	1,463,528	1,304,183
Net Natural Gas Liquids Produced.....	42,462	40,731
Crude Oil Processed at Refineries.....	759,152	685,101
Refined Products Sold.....	842,054	821,260
Natural Gas Liquids Sold.....	117,410	122,017

**Operations data include Gulf's equity in all operations in which it has an interest.

Highlights of the Economy

by T. A. Carey

Decker, Gaither and Anderson

The Governor of Hawaii, William F. Quinn, greeted the Analysts warmly and apologized for the rainy weather. He emphasized the sound finances of his state and its desire for good credit and lower interest on its obligations through a favorable and informed opinion in the mainland financial community.

Last year was unusual in that the state's bonded debt was reduced by 5%, and improvements were paid from current revenue. Future development schedules, however, are heavy, and a \$17 million improvement program is now underway. The governor expects to issue general obligation bonds in this instance, and hopes to maintain a balance of two-thirds debt and one-third current revenue in paying for improvement programs. The state's high taxes have not and should not unduly restrain Hawaii's superior growth rate and high living standards in his opinion. Development has, of course, been most intense on Oahu, and the acceleration of growth in the other islands, where population until recently has been declining, is a principal objective. He recommended the book, "State of Hawaii Finances" as an excellent summary.

San Francisco Society President Joseph Edelstein responded to Governor Quinn's welcome with the hope that should the Analysts' National Convention be held in San Francisco in 1966 or 1967, a post-convention visit to Hawaii would be attractive to many members.

Raymond Y. C. Ho, Director of the Department of Budget and Review, spoke on the organization and finances of the state government. He recalled the visit two months earlier of 13 New York Bond Analysts, and expressed pleasure in the increased mainland interest in Hawaii.

With statehood in 1959, the Reorganization Act of that year provided for 18 governmental departments, instead of the 100 or more

then in being. The Act also calls for a strong executive branch, and the reorganization and consolidation is currently proceeding. Consulting on reorganization procedures is the firm of Booz, Allen & Hamilton.

Mr. Ho noted that all executive offices, except the Lt. Governor, are appointed by the Governor. Legislators are 70% college graduates; half are lawyers. Hawaii is proud of its political maturity, determined to avoid haphazard development of its limited land, and is preparing a master land use plan. An inter-island air ferry system is also proposed.

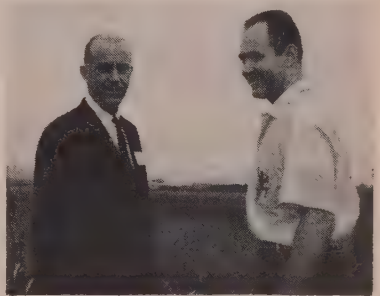
In the next six years the state's capital expenditures may reach a total of \$333 million, including a \$30 million East-West Center, an educational showcase for foreign students. In the 1961-62 budget of \$239 million, capital expenditures comprise \$54 million. The new budget is expected to show a small surplus without a tax increase, thus increasing the surplus in the general fund which was in a 1955 deficit position. Hawaii levies a general excise tax on all sales of goods. Of all the tax revenues, the sales tax comprises 62%; income taxes, 23%; property taxes, 11%; and miscellaneous, 4%. All tax revenues, however, make up only 55% of total general fund revenues, with federal payments accounting for most of the balance.

Tourism in Hawaii was discussed by a panel, including representatives of the Sheraton-Hawaii Corporation, the Hawaii Visitors Bureau, Hawaiian Airlines, Ltd., and Aloha Airlines, Inc.

Tourism was cited as the state's fastest growing industry, with 336,000 visitors in 1959. It is estimated that visitors spent \$135 million in 1960. This compares with military expenditures of about \$365 million; sugar revenues of \$127 million; pineapple revenues of \$125 million; and construction volume of about \$270 million. To encourage tourism, the non-profit Visitors Bureau



Joseph Edelstein, president of The Security Analysts of San Francisco, left, is shown being greeted in Honolulu by Hawaii's Governor, The Honorable William F. Quinn. The Governor emphasized the sound financial condition of his state.



Richard S. Nair, left, of the San Francisco Society, is shown in a sugar cane field of the Oahu Sugar Cane Co. With him is Richard E. White, the company's assistant secretary-treasurer.

spends \$1,500,000 in promotion, one-third of which is privately subscribed, with the balance paid by the state. Officials hope for a 20% per year expansion in tourist business, and regard the billions spent by tourists in Europe as evidence that the increase will come.

While Waikiki remains the tourist center, further expansion will concentrate on the outer islands, with possible flights to them from the mainland. Waikiki hotel rooms now exceed 7,000, compared with 4,750 in 1956 and 1900 in 1946. The occupancy rate for all Waikiki hotels was 84% in 1960. Some temporary overbuilding exists in cooperative apartments.

The two local airlines, with perfect safety records, enjoy good air fields, but an aircraft utilization of only five hours per day. Traffic is 60% from local people who just

don't fly at night. In 1960 both lines carried 940,000 passengers.

Harbor, Highway, and Airport Facilities were the subject of a panel composed of representatives of the Port of Honolulu, the Department of Transportation, and the Hawaii Aeronautic Commission.

The financially independent Harbor Board operates modern facilities, including those for bulk sugar, liquid products, and containerized cargoes. Imports are 8,000,000 tons per year, over half of which is through Honolulu. Needed expansion will be financed through bond issues and a possible increase in wharfage charges, which at 45¢ per ton are one-half the Pacific Coast rates. On free land \$26 million has been invested in harbor facilities. Earnings in 1960 were \$2.8 million,

and should increase \$600,000 in 1961.

Despite a regular gasoline price of 41.5¢ per gallon, there is one vehicle on Oahu for every 2.4 persons. The mainland ratio is one vehicle for each 2.8 persons. Due to high traffic density and military traffic, Hawaii participates in the Federal Interstate Highway Program. Over the next five years \$134 million will be spent on island roads. Currently there are 3,000 miles of highway in the state. A \$50 million group of fuel tax bonds sold between 1956 and 1959 are rated AA.

The Aeronautics Commission, supported in part by a 3½¢ per gallon jet fuel tax, had revenues of \$3 million in 1960, and expects \$4 million in 1961. The increase is in jet travel. Present \$19 million in-

debtedness includes \$14 million in revenue bonds issued two years ago. A new terminal will open in 1962.

At a luncheon the Analysts heard Neal S. Blaisdell, Mayor of Honolulu; Dr. James H. Shoemaker, Bank of Hawaii; and Dr. Thomas K. Hitch, First National Bank of Hawaii.

Hawaiian Boom to Continue

One of the nation's ten fastest growing states, Hawaii's population of 600,000 in 1960 is expected to reach 800,000 by 1970. In this period 60,000 new jobs and 100,000 new homes will be needed. The City and County of Honolulu plans \$165 million in capital expenditures over the next five years. Schools will make the heaviest demands on funds. It is interesting that at present over \$200 million in life insurance funds are invested in Hawaii.

Hawaii's boom is attributed to increases in population and in military and tourist spending. With construction shortages now largely overcome, growth should revert to a normal long term rate, which nevertheless should exceed that of the mainland. Unemployment in the last 10 years has never risen above 5%. Last year saw a new high in industrial investment. Hawaiian industry typically imports and processes raw materials for local consumption.

Hawaii's debt structure is simple and limited to 15% of assessed valuation. Present debt, including revenue bonds, is about 10% of assessed valuation. Debt service takes 3% of state revenues, and boasts a perfect repayment record.

Hawaii is, naturally, vulnerable to a dock strike, but the speakers noted the responsible attitude of union leaders in recent years, the maturity of the public in this matter, and legislation which permits the state to seize and operate the docks if they are struck.

Groups of Analysts visited the Board of Water Supply, the Harbor, and the new Ala Moana shopping center. Significant for Oahu's future industrial progress is its vast fresh water supply. Rain drenched mountains provide water enough for all foreseeable growth.

BANKS and TRUST COMPANIES

by James K. McWilliams
Henderson & Co.

There are seven commercial banks serving the Hawaiian Islands. Five are state banks, two are national banks. Only the national banks are members of the Federal Reserve System, but all are protected by the FDIC. There are no branches of foreign banks. Commercial banks are not limited to the number of branches they may have in the Islands as a whole, but may have only three branches in the City of Honolulu.

The methods of operation of the commercial banks are identical to those of the Mainland—ranging from the use of modern machine accounting techniques to branches using drive-in Tellers' Windows. Interest rates must be competitive with the Mainland. Total deposits have grown from \$395,000,000 in 1955 to \$743,000,000 at the end of 1960. In the same period, loans have more than doubled from \$197,000,000 to \$404,000,000. Mainland banks have been called upon to help finance the great growth of recent years. This Mainland investment has been dollar assistance not for division of risk.

In the Hawaiian Islands, a trust company cannot by law perform a commercial banking function. A commercial bank could enter the trust business, but historically none have done so nor do any apparently plan to do so. There are five trust companies serving the area, four in Honolulu, and one in Hilo, on the Island of Hawaii. It is estimated that these companies manage about \$750,000,000 in real property and securities.

Generally speaking, trust operations are not profitable because of high-cost personnel, low statutory fees, and traditionally no fee-splitting with co-trustees. The trust departments serve as nuclei and feeders for other profitable types of business which the trust companies engage in. A trust company is known as a "department store of finance other than commercial banking." Such services include security brokerage, real estate sales and management, insurance agencies, tax services, safe deposit, etc.

As for investment restrictions, the "Prudent Man Rule" applies.* At one time, investments were primarily in local securities because of time barriers and inadequate communication with the Mainland. Now, many Mainland securities are used. Separation of the security brokerage business from the trust business does not seem imminent.

*For a detailed discussion of the "Prudent Man Rule (Statute or Theory)," see *Financial Analysts Journal*, July-August, 1960, page 27.

McLOUTH STEEL

Significant facts from the **1960** Annual Report

FOR THE YEAR

	1960	1959
Net sales	\$216,449,144	\$176,811,659
Depreciation of properties	9,443,774	14,105,539
Net earnings	16,438,135	10,058,232
Cash dividends paid on preferred stock	705,785	899,362
Net earnings reinvested in the business	15,732,350	9,158,870
Net earnings per common share	\$4.51	\$2.63
Net additions to properties	11,326,592	10,309,738
Average number of employees	4,108	3,302

AT THE YEAR-END

Working capital	\$ 41,228,817	\$ 41,305,189
Total investment in properties—at cost	196,253,969	185,799,655
Long-term debt	60,342,000	67,420,000
Equity of common shareholders	95,126,670	81,020,107
Equity per common share	\$27.29	\$23.25
Number of common shares outstanding	3,485,404	1,722,877
Number of common shareholders	7,822	6,481



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progress has been a by-word for natural gas. The growth of this young industry over the past decade is an eloquent tribute to the nation. For such progress springs from an enterprising people, eager to search for better ways to fuel the nation's economy. > Evidence of this progress can be seen in the rich heart of mid-America, served by Texas Gas. Companies planning plant locations are invited to check the resources of this eight-state region blessed by flexible transportation, good labor and abundant natural gas energy. > For a report on the progress of our region and our company, write to the Public Relations Dept., Texas Gas Transmission Corporation, Owensboro, Ky., for a copy of the 1960 Annual Report.



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S E R V I N G T H E B I G R I V E R R E G I O N



Hawaiian Field Trips

The field trips included a visit to the now-famous Ala Moana Shopping Center being built on Dillingham property located between Honolulu and the Waikiki Area. The shopping center is an excellent example of the bold foresight and careful planning and development of property in the Islands. Although only half completed, the stores which have relocated in the Center are already experiencing sales well in excess of expectations.

The three companies visited on this particular field trip were the Honolulu Paper Co., Ltd.; the Von Hamm-Young Co., Ltd.; and Lewers & Cooke, Ltd. On this first contact with Hawaiian companies, certain characteristics were noted which are common to nearly all Island firms:

1. Except for agricultural products, few basic raw materials are available in the Islands, and no manufacturing from raw materials is done. The Honolulu Paper Co. imports bulk paper and converts it into the many forms necessary for local use such as stationery and merchandise cartons. Lewers & Cooke is a major importer and distributor of lumber and other building materials serving the local construction industry.

2. Partly because of the unique history of the Islands, most firms have a wide diversity of operations. The Honolulu Paper Co. is not only a paper converter, but is also a distributor of office supplies and office furniture. The von Hamm-Young Co. is engaged in nearly 30 different businesses ranging from real estate ownership and development to designing and printing textiles for the garment industry. They are a major distributor of heavy goods such as machinery, automobiles and appliances, and non-durables such as drugs and liquor. They also distribute about 35% of all alcoholic beverages consumed on the Islands.

3. The most valuable and prized asset of an Island company is land. Both Lewers & Cook and the von Hamm-Young Co. (through its as-

sociated company, the Alexander Young Co.) own very valuable properties which are or will be in the process of development.—T. A. C.

* * *

Construction and Land Development

Construction is one of the most important segments of the Hawaiian economy. To illustrate, \$276,000,000 in bids were let in 1960 while tourism contributed to the economy \$135,000,000; sugar, \$127,000,000; pineapple, \$125,000,000; and military spending, \$365,000,000. For 1961, an estimated \$289,000,000 is planned or out on bid. This includes residential construction, construction of defense facilities, quarters for military dependents, industrial and commercial building, and state, local, and federal government construction projects, with defense and related construction constituting something less than half the total.

There is no overall plan for the development of the Islands. A study is being made for a zoning plan on Oahu, and an interim plan is in effect for the Waikiki Area. However, because so much of the land is held by perpetual estates, business firms, large individual landowners, and the government—all with responsible management—an orderly development has taken place.

It has been deemed necessary or prudent by the trustees of large estates, such as the Bishop Estate, to retain ownership of land, and through leasing, derive income for the designated purposes of the estates. Other lands held by individuals or firms in land companies cannot be sold because the gain over the usual very low cost would be taxable as ordinary income. Therefore, a very large portion of the usable land in the Islands is developed under leasehold.

Since, under the terms of the leases, all improvements made by the lessee revert to the lessee at the termination of the lease, the lessor or landowner commonly makes all of the basic improvements himself. The cost of this original develop-

ment is high, and is the major part of the estimated value of land when leases are negotiated. It is cost of development, not scarcity, that makes land values high in the Islands.

Tunnels through the Pali to the windward side of Oahu have opened new areas for suburban living. The Kaneohe Ranch Co. is developing much of its holdings there for residential use.

Hawaiian Pacific Industries is a company which does much residential development work and construction. Most of their work is done for large landowners such as the Bishop Estate. The firm derives income not only from construction and development, but shares in rental income received from leases over a period of years.

Henry Kaiser has a long-range program to develop a large area on the southeastern tip of Oahu. The area or locality to be formed will be known as Hawaii Kai. Most homes and commercial sites are to be leased. The first homes are now being built and sold.—T. A. C.

* * *

The Pineapple Industry

By Robert B. Johnson
Schwabacher & Co.

In terms of economic significance to Hawaii, pineapples rank third in importance . . . (first, of course, is federal expenditures for national defense; second is sugar; third is pineapple production; and fourth is tourism).

Of the total value of agricultural output in Hawaii, approximately 43% is derived from pineapples. In terms of land area in Hawaii pineapple growing accounts for approximately 75,000 acres. And, in terms of dollar value it is expected that this year's production of pineapples will approximate \$130 million.

Hawaii far outproduces all other areas in the world combined in pineapple. Although production in this state goes back more than a century, the industry did not reach substantial levels until after 1913.

Pineapple cultivation passes through a four-year cycle between plantings. The first crop requires

about 18 months to mature . . . the second and third crops grow on the already matured plants, and hence require only about 12 months. This is followed by new planting.

Today, Hawaii is truly the home of the pineapple. Of that sold here in the United States approximately 80% is grown on the Islands of Hawaii. The production of pineapple is as important to Hawaii's economy as wheat is to Kansas . . . cotton to Louisiana . . . or oil to

Texas. Literally thousands of Hawaiians make their living in the pineapple industry. Wherever one goes in the Islands one encounters pineapple. Cal-Pak, for example, has a huge water tower which is shaped in the form of a pineapple—and this can be seen all over Honolulu. Canneries are located on various plantations, with millions of plants standing in rows covering rural areas in most of the Islands. Along the waterfronts of Hawaii's

ports many millions of cases of canned pineapple are loaded aboard ocean freighters each year.

The Hawaiian Pineapple Co. (now Dole Corporation) was organized in 1901 . . . the first pineapple pack, in 1903, was about 1,800 cases. Since that time the pineapple industry has grown steadily. New methods of growing and of canning pineapple have been developed, resulting in one of the most modern and efficient agricultural operations in the world. Today, pineapple is no longer a tropical oddity but a staple American fruit.

The industry is centered on five of the six main Islands — Oahu, Maui, Molokai, Lanai and Kauai. There are seven pineapple companies . . . they operate 11 plantations and eight canneries. Three of the largest canneries are in Honolulu—less than five minutes from the center of the city. All together the pineapple industry offers employment to about 23,000 people. In recent years production has averaged about 32 million cases.

Dole Plant Tour

The Dole Corporation canning plant in Honolulu, like most of its sister plants, is a model of industrial efficiency. Here are produced pineapple in slices, in chunks, in tidbits . . . and the pineapple also is crushed for the production of millions of gallons of natural, unsweetened pineapple juice.

From the pineapple shells bran for cattle feed is produced.

Our tour through the Dole cannery was most enlightening . . . and I am sure that, from now on, when any of us enjoy canned pineapple we will reflect more appreciatively upon the efficiency with which this crop is grown, harvested, canned and marketed.

* * *

Pearl Harbor

Our group was afforded the distinct privilege and very pleasant opportunity of touring Pearl Harbor as guests of Rear Admiral E. A. Solomons, Commandant of the 14th Naval District.

Some 19 years plus after December 7, 1941, Pearl Harbor bears but

REPORT IN BRIEF

	1960	1959
Sales and Revenues	\$240,266,997	\$232,559,479
Net Earnings	8,750,209	11,290,664
Earnings per Share of Common Stock	\$2.25	\$2.92
Dividends per Common Share	\$2.00	\$2.00
Working Capital at December 31	69,747,688	77,698,897
Shareowners' Investment (Net Worth)	110,486,906	109,173,541
Capital Expenditures	17,064,000	5,508,000
Common Shares Outstanding at December 31	3,883,470	3,869,654
Number of Shareowners at December 31	19,833	18,944

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1960
ANNUAL REPORT

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Here is how North American Aviation has increased its sales by more than 400% in the past 10 years (and an indication of what the future holds)

few scars to remind one of that Sunday morning "a day that will live in infamy." Nevertheless, I'm sure each one of us felt an unmistakable aura of deep emotion as we toured the Harbor in the Navy craft.

Admiral Solomons in addition to commanding the 14th Naval District, commands also the Hawaiian Sea Frontier which covers an area of more than 10 million square miles of ocean in the mid-Pacific—with Pearl Harbor as its hub. The 14th Naval District includes the shore-based activities of the Navy in this area. On the Hawaiian and other outlying islands, such as Midway and Kwajalein, its buildings and installations have a combined value today of over \$1.5 billion. Some 22,000 Navy personnel, and 9,000 Marines are based here, and the Pearl Harbor Naval Base is a complex of the major installations of the Naval District.

Included among key activities at the Naval Base is the Naval shipyard—over 50 years old. As we toured this installation we came to realize why this is the largest industrial organization in the entire Pacific. The shipyard has four dry docks, two marine railways, and many many shops . . . it services more than 800 ships in an average year. On the shipyard payroll are nearly 5,000 civilians thus making it Hawaii's major employer.

The submarine base represents another key activity. Here are located the headquarters of Pacific Fleet Submarine Force. In addition to the two squadrons of conventional submarines, there is also a squadron of missile-launching subs and a squadron of nuclear-powered subs.

As many of us inferred upon the completion of our tour of Pearl Harbor, the Navy plays an important role in the economic life of Hawaii. All in all the Navy spends about \$170 million every year for salaries, supplies and services in Hawaii . . . and over 20,000 Navy and Marine Corps men and their families contribute to and participate in Hawaiian community life.

—R. B. J.

MAY-JUNE 1961

In 1951, North American Aviation, then a leading aircraft manufacturer, had total net sales of \$177,675,354. In the fiscal year ending September 30, 1960, North American's sales exceeded \$964,000,000—an increase of over 400% since 1951.

This growth picture is the result of a sound diversification program into the fields of the future: electronics, space, nuclear power, rocket engines, and advanced aerospace vehicles. The diversification program is the result of extensive research, development, and test programs carried on by NAA during the past ten years. The following seven achievements are some of the results of those programs:

- 1) **INERTIAL NAVIGATION**—first navigation system accurate enough to guide America's nuclear-powered Polaris submarines was produced by NAA's Autonetics Division.
- 2) **ROCKET PROPULSION**—Rocketdyne Division produced the rocket engines that have launched more than 300 of America's major missile and space flights.
- 3) **MACH 3 FLIGHT**—The B-70 Valkyrie, the Free World's first Mach 3 (2000-mph) jet airplane, is now being built at the Los Angeles Division.
- 4) **NUCLEAR POWER**—Snap 2, the first compact nuclear reactor for producing electricity in space vehicles, was developed by Atomics International Division.
- 5) **NAVAL AIR POWER**—Navy's new A3J Vigilante attack bomber, the most versatile Mach 2 airplane in the world today, was built by the Columbus Division.
- 6) **ELECTRONIC COMPUTERS**—Autonetics' Recomp II was the first all-transistorized compact digital computer built for industrial and scientific use.
- 7) **AEROSPACE FLIGHT**—rocket-powered X-15, built by Los Angeles Division, will take man higher (100 miles) and faster (4000-mph) than he has ever flown.

This is an impressive record, yet even now North American is engaged in research and development programs that are unparalleled in the company's history.

NORTH AMERICAN AVIATION

DIVISIONS: ATOMICS INTERNATIONAL, AUTONETICS, COLUMBUS,
LOS ANGELES, ROCKETDYNE, SPACE & INFORMATION SYSTEMS



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Master plan of billion-dollar St. Louis redevelopment.

Progress, resources and power aplenty make industry grow in booming St. Louis

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The St. Louis area—The Strategic Center of America—has become a virtual beehive of industrial and civic activity . . . new factories going up . . . new multilaned highways . . . a new spirit of progress everywhere.

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Central Location: St. Louis is near the geographical center of the United States, and within 100 miles of the population center of the nation . . . a population center moving steadily toward the city.

Excellent Transportation: 18 trunk-line railroads, extensive air and highway transport facilities, the nation's largest river traffic system . . . feed the city.

Unlimited Water Supply for Industry . . . from two of the world's mightiest rivers, the Mississippi and the Missouri.

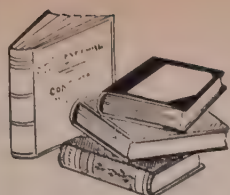
Highly Skilled, Diversified Labor: No single industry employs more than 8% of the total labor force. Almost any need can be largely met by the labor pool already in existence.

PLENTY OF LOW COST POWER

Union Electric System can meet the largest industrial requirements. During the past ten years, Union Electric has spent \$420 million, nearly doubled its capacity. \$290 million more has been allocated for expansion during the next five years.

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BOOKS for ANALYSIS

THE CITY. By Paul Ferris. New York: Random House. 224 pages. \$5.00.

Reviewed by WARREN BURNS

Having recently returned from "The City," (London's financial center) and having had the opportunity of meeting many of the men who make The City hum, this reviewer will—unequivocally—state that this book is an excellent introduction to the men and money of that fascinating area.

And as for the author's statement that "the pleasures of antiquity tend to put a break on progress," I can't very well document my disagreement—having been in London only six days—but my running (sic) observation would be that despite the pleasures of antiquity, progress is their most important product.

Chapters deal with: A View of the City; Stock Market Men; The Bill Broker's Career; Merchant Banks of Olde England; How They Do It at Hambros; Sterling Crisis; The Bankers' Tribunal; The City's Gold; £40,000,000 for a Shop; and The Optimists of Lloyd's.

Mr. Robert Allan, a member of "The City" (being a director of *The Financial Times*) and a Conservative Member of Parliament for Pad-

dington South, told me that he concedes Mr. Ferris' book as being well done. However, one can sense among "The City men" themselves that the book leaves much to be desired—but then that's so with every profession; i.e., the men who spend their lives in it would never concede that an outsider could understand it.

However, the important point here is that this book was not meant for the "insiders," but rather for the "outsiders;" and a careful reading by the latter will put them *au courant* with much of the City's local and world-wide money problems if not with all of its ancient mystery.

And for a City, which is older than records (it was mentioned prior to A.D. 61), the author's final chapter on the "Lord Mayor of London" makes delightful reading.

For readers whose appetite may first be whetted by this book, there are two other, relatively recent, books which might interest them: "How the City Works," by Sir Oscar R. Hobson; and "Something in the City," by Sir John Benn. Sir Oscar—dean of Britain's financial writers—spoke two years ago to the visiting members of *The New York Society of Security Analysts*, on the latter's initial visit to London.

THE NEW CAPITALISTS. By Lewis O. Kelso and Mortimer J. Adler. New York: Random House, Inc. 109 pages. \$9.50.

Reviewed by FRANCES HAIDT, HERZIG, FARBER & McKENNA

Were President Kennedy and Secretary of Labor Arthur J. Goldberg more philosophical, they would recognize that the 5,705,000 jobless today—far from being a problem—represents progress. Unemployment, according to Authors Kelso and Adler (both directors of the San Francisco Institute for Philosophical Research), is natural and desirable. A policy of full employment (Labor leaders Meany and Reuther please note) is irrational and socialistic.

Technological changes result in labor progressively producing less, and capital producing more of our Gross National Product. In a parallel manner, what seems to be in the offing is a shrinking of the labor force and an expansion in the ranks of capitalists. Thus, the solution to unemployment is to switch classes.

Certainly we working Financial Analysts acknowledge becoming "a new capitalist" as the American dream. Were it not for insufficient funds we would leave off tearing into securities and start clipping coupons. Our authors mean to see that we get the necessary financing.

Instead of such Marxist's palliatives as unemployment compensation and food packages, a capitalist government would make loans readily available for the purchase of income producing equities.

Since no red—excuse me, blue,



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quarterly dividends have been declared as follows:

Common Stock*: \$.30 per share

\$4 Cumulative Preferred Stock: \$1 per share

\$4.50 Series A Convertible 2nd Preferred Stock: \$1.12½ per share

\$2.25 Series B Convertible 2nd Preferred Stock: \$.56¼ per share

These dividends are payable June 15, 1961 to stockholders of record at the close of business May 19, 1961

*131st consecutive dividend

JAMES E. McCAULEY, Treasurer
May 3, 1961



CALIFORNIA-PACIFIC UTILITIES COMPANY

Quarterly dividends payable June 15 to shareholders of record June 1, have been declared at the following rates per share:

5% Preferred	25¢
5% Convertible Preferred	25¢
5.40% Convertible Preferred	27¢
5½% Convertible Preferred	27½¢
Common	22½¢

D. J. Ley, VICE-PRES. & TREAS.

May 10, 1961

so sorry — true-blooded American would suggest redistribution of existing wealth to achieve this objective “The New Capitalists” plan is linked to new capital formation; i.e. they propose to create new capitalists concurrently with the formation of new capital.

It appears that our conventional methods of financing corporate enterprises are based on antiquated Franklinian traditions of thrift and toil. These are leading us to periodic recessions and depressions and in turn to the socialization of capital. (Our only alternative is the complete failure of our economy). In its place, Authors Kelso and Adler have a program for capital financing without savings.

To preserve our free enterprise system a new government agency a la F.H.A., which they dub C.D.I.C. (Capital Defusion Insurance Corporation) will be set up to insure banks which will finance security acquisition, via non-recourse loans, to individuals seeking to buy new issue equities. Lehman and Lomasney and colleagues get ready.

Yes, this program would give substantial economic power to the government, but since the government would be merely “umpiring the rules of the economy, without becoming one of the players” (whatever that means) the sanctity of private capital will be preserved and we will remain free.

The criteria of eligibility: who will determine who gets the loans and for what amounts and for which issues are not spelled out. It is suggested however that some preference might be given to those with higher educational standards and that those with smaller amounts of capital be given the safer, or do they mean surer, stocks. This whole topic, however, is but a minor administrative problem, unimportant compared to the construction benefits which will ensue.

Not only will this financed-capitalist plan convert our present economy into a truly capitalist society, but it will win the cold war, develop underdeveloped areas, promote technological improvement, control inflation, remove stock speculation, raise educational levels, stimulate creativity and give impetus to self-improvement. In fact the millennium will be reached without the coming of the Messiah.

This universal panacea would be brushed off as pure *hogwash* were it not for the professional standings of its authors and the status of its publisher. Any humorous aspects of this proposal are negated by an overlay of “McCarthy-like” apologia and “intellectual” snobism.

* * *

ECONOMIC THEORY AND OPERATIONS ANALYSIS. By William J. Baumol. Prentice-Hall, Englewood Cliffs, N. J., 1961. 483 pages, \$9.00.

Reviewed by FRANCIS J. CORRIGAN,
SAINT LOUIS UNIVERSITY

There are few today who will not agree that science, technology, mathematics and economic theory are assuming an ever-increasing role in policy determination in many important phases of business operations. The growing realization from the point of view of the educator

as well as the businessman and the Financial Analyst is not only that scientific research will be the main source of a greatly increased supply of new products, materials and services but that the scientific point of view is becoming no less important in supplying answers to a wide range of business questions.

A corollary of this development is that the person who possesses a working knowledge of the rigorous tools of mathematical economics will have a marked advantage over those who lack such orientation. Even now a fair degree of sophistication in the use of modern mathematical and statistical concepts is required to make meaningful decisions for such business problems as the best method for handling inventory levels, controlling the flow of materials, determining advertising budgets, and analyzing cost or sales information.

For those seeking both a systematic exposition of microeconomic analysis as well as an intuitive grasp of the many recent developments in



THE DAYTON POWER AND LIGHT COMPANY

DAYTON, OHIO

155th Common Dividend

The Board of Directors has declared a regular quarterly dividend of 60c per share on the Common Stock, \$7 Par Value, of the Company, payable on June 1, 1961, to stockholders of record at the close of business on May 15, 1961.

At the same time the Board of Directors also declared a three-for-one stock split of the Company's Common Stock, \$7 Par Value, payable to stockholders of record at the close of business on May 15, 1961, by the issuance of two additional shares of such stock for each share of such stock outstanding on said date.

The regular cash dividend of 60c per share declared today is payable only on the shares outstanding before the stock split.

GEORGE SELLERS, Secretary
April 13, 1961

BOSTON EDISON COMPANY

Preferred Dividend

A quarterly dividend of \$1.06 per share has been declared payable on the first day of May 1961 to stockholders of record at the close of business on April 10, 1961 of the Company's Cumulative Preferred Stock, 4.25% Series.

Preferred Dividend

A quarterly dividend of \$1.20 per share has been declared payable on the first day of May 1961 to stockholders of record at the close of business on April 10, 1961 of the Company's Cumulative Preferred Stock, 4.78% Series.

Common Dividend No. 288

A quarterly dividend of 75 cents per share on the Common Stock of the Company has been declared payable on the first day of May 1961 to stockholders of record at the close of business on April 10, 1961.

Checks will be mailed from Old Colony Trust Company, Boston.

ALBERT C. McMENIMEN
Treasurer

Boston, March 21, 1961

mathematical economics, Professor Baumol's text could not appear at a more opportune time. In the four broad sections of his penetrating analysis, Professor Baumol discusses such subjects as input-output, activity analysis, linear programming, game theory and decision theory. For those who might find some of the mathematics a little esoteric, Dr. Baumol has thoughtfully provided a separate chapter on differential calculus which is the only mathematical background necessary for a complete understanding of the material presented. The book is amply illustrated and is recommended for stimulating reading.

* * *

AN INFLATION PRIMER. By Melchior Palyi. Henry Regnery Company, Chicago, 1961. 150 pages, \$4.00.

In the opening page of this little book, Dr. Palyi quotes from Montesquieu's "Spirit of the Laws" that "the tyranny of a prince in an oligarchy is not so dangerous to the public welfare as the apathy of a citizen in a democracy." With this familiar passage, Dr. Palyi sets the pervasive theme of his book that modern inflation is a pernicious disease and if society through ignorance, indifference or bland acceptance permits the termites of inflation to continue to nibble away the purchasing power of the dollar, the inevitable harm to our nation, its institutions, and the way of life

of its citizens, will not be pleasant to contemplate.

Dr. Palyi, who taught in Berlin during the great German inflation of 1923, traces the destruction and disintegration of the German economy and shows how the uncontrolled inflation in that country headed toward the grand finale: total repudiation of the currency. As an instructor in a Berlin college, Dr. Palyi saw

his salary rise from an inflated 10,000 marks in early 1922 to 10,000,000 marks by July, 1923. The rotting mark and the necessity of trying to meet the skyrocketing cost of living forced a change in his salary payments. His salary, which was formerly paid twice a month, now had to be paid twice a day, in the morning and in the afternoon. In non-technical language, Dr.

-1960- Greatest Year In Our History

Last year, Mountain Fuel Supply Company recorded new highs in sales, earnings, dividends and number of customers. A fully-integrated natural gas utility, the Company serves the rapidly expanding Utah-Wyoming area. It recently acquired an important additional source of gas supply, which, coupled with its past record of development and growth, makes its future look bright.

Highlights of 1960 (and comparison with 1959)

	1960	1959
Gas sales (billions of cubic feet)....	81.6	69.6
Total gas revenues.....	\$33,490,693	\$28,528,855
Net income.....	\$ 4,085,634	\$ 3,871,619
Net income per share.....	\$1.87	\$1.77
Dividends per share.....	\$1.25	\$1.20
Book value per share.....	\$20.06	\$19.44
Number of customers.....	173,524	165,663

*Dividends have been paid each year since its organization in 1935.
Listed on New York Stock Exchange — Symbol MFS.*

1960 Annual Report will be sent upon request. Address: Secretary, Mountain Fuel Supply Company, P. O. Box 989 Salt Lake City 10, Utah



MOUNTAIN FUEL SUPPLY COMPANY
180 East First South Salt Lake City 10, Utah

**COMMON DIVIDEND
No. 112**

The Board of Directors today declared the following dividend:

22½ cents per share on the Common Stock, payable June 15, 1961 to stockholders of record at the close of business May 15, 1961.

The Goodyear Tire & Rubber Co.
By R. L. Miller,
Secretary
April 3, 1961

THE GREATEST NAME IN RUBBER

Palyi unravels the skeins of our monetary, credit and fiscal policies and their impact on the purchasing power and foreign value of the dollar. For those concerned about the nation's recent gold loss, Dr. Palyi provides an analysis of the gold crisis and what might be done to alleviate the problem.

If society and the Kennedy Administration are seeking an operative philosophy for diagnosing the syndrome of inflation, Dr. Palyi has the answer: balance the budget and stop the monetization of the national debt by the Federal Reserve System.

—F. J. C.

* * *

THE QUALITY AND ECONOMIC SIGNIFICANCE OF ANTICIPATIONS DATA. A Conference of the Universities—National Bureau Committee for Economic Research—A Report of the National Bureau of Economic Research, New York, Princeton, N. J. Princeton University Press. 466 pages. \$9.00.

Reviewed by PHILIPP H. LOHMAN,
UNIVERSITY OF VERMONT

The economics of expectations as a professional discipline is distinctly a postwar development. To be sure, for several decades there have been theoretical speculations as to the nature and role of anticipations in economic processes. But it took the amassing of a plentiful supply of statistics to change the study of ex-

pectations from a mere surmise to that of the preparation of systematic treatises.

A conference, held at Princeton, took a hard look at available data stemming from such sources as the investment-intentions survey conducted jointly by the U. S. Department of Commerce and the S.E.C.; the consumer-intentions survey conducted under the auspices of the Board of Governors of the Federal Reserve System by the Survey Research Center at the University of Michigan; the Illinois employers' labor force anticipations and the Midwest region railroad shippers' carloadings forecasts; the McGraw-Hill's survey on anticipated capital goods expenditures; and others.

In the introduction, Profs. Albert G. Hart, Franco Modigliani, and Guy H. Orcutt say that the papers contained in this volume are quite different from papers written earlier in this field, for here "The predictive value of expectations is systematically studied to aid us in forecasting, to tell us what kind of information the stated expectations contain, and to give clues to how the economic process (jointly with other social processes) generates expectations."

In Part I, forecasting in relation to business requirements and to government policy-making is considered. Part II deals with the formation of business and consumer expectations. It includes a "revalu-

ation of the railroad shippers' forecast" which concludes with this encouraging note: "... it appears likely that by simple adjustments to filter out bias we can transform the shippers' forecast into a workable source of data on what businessmen expected about the physical volume operations, and thus go a long way toward rescuing expectational interpretations of the past from the limbo of the unobservable."

Part III reports on "The Predictive Value of Consumers Union Spending-Intentions Data" and on "The National Industrial Conference Board Survey of Capital Appropriations." It includes, what one participant calls, "a rather tantalizing glimpse into a body of data" in the paper by Mr. James J. O'Leary, of the Life Insurance Association of America, on "Forward Investment Commitments of Life Insurance Companies." He feels that "much more thought and careful study need be given to the forward commitment data, but it seems that they are of possible aid in forecasting (1) the outlook for the capital market and interest rates, (2) developments in residential construction, and (3) business plant and equipment expenditures."

The last part of this attractively-presented and well-written volume brings together reviews of statistical data series already considered at earlier conferences—capital expenditures forecasts by individual firms;

**CONSOLIDATED
NATURAL GAS
COMPANY**

30 Rockefeller Plaza
New York 20, N. Y.

DIVIDEND No. 53

THE BOARD OF DIRECTORS has this day declared a regular quarterly dividend of Fifty-Seven and One-Half Cents (57½¢) per share on the capital stock of the Company, payable May 15, 1961 to stockholders of record at the close of business April 17, 1961.

JOHN MILLER, Secretary
March 28, 1961

GOLD NATIONAL
BATTERIES, INC.

**GOULD-
NATIONAL
BATTERIES, INC.**

Manufacturers of a complete line of automotive, industrial and military storage batteries plus motive specialties.

**A REGULAR
QUARTERLY DIVIDEND**
of 30¢ per share on Common Stock, was declared by the Board of Directors on April 11, 1961 payable June 15, 1961 to stockholders of record on June 1, 1961.

A. H. DAGGETT
Chairman

ST. PAUL 1-MINNESOTA

**SOUTHERN
NATURAL GAS
COMPANY**

Birmingham, Alabama

Common Stock Dividend No. 89

A regular quarterly dividend of 50 cents per share has been declared on the Common Stock of Southern Natural Gas Company, payable June 14, 1961 to stockholders of record at the close of business on May 31, 1961.

W. S. TARVER,
Secretary

Dated: April 29, 1961.

comments on the predictive quality of the McGraw-Hill surveys; and, an analysis of the results of the Department of Commerce-Securities and Exchange Commission annual survey of business investment anticipations. A paper on "The Value of Anticipations Data in forecasting National Product" concludes the book. Expert economists have submitted comments on each paper.

To a Financial Analyst the use of anticipations data will be most likely direct forecasting. To the authors, anticipations data are "one of our basic sources of evidence on how firms and households make the decisions which in our decentralized society guide the whole course of economic development. To account satisfactorily for economic change, we need to develop and test hypotheses about the way experience shapes people's view of the future, the way this view of the future shapes their decisions, and the way further experience reshapes forecasts and plans. The resulting insights in turn can enhance our ability to forecast."

Much research remains to be done in this field. Every expectation, for example, is held with some degree of uncertainty. Is it possible, so economists wonder, to ask people to give us "confidence limits" for some estimates? Could they tell us whether they ever have different "strategic assumptions" about a single variable for different planning

problems in hand simultaneously, so as to play safe over a range of possibilities? Or take the forecasting of inventory investment, a field in which "the Analyst has little on which to rely with confidence." Here, too, more experience and experimentation are necessary to form a judgment on the usefulness of anticipations data. The achievements of the Dun and Bradstreet data and those of the *Fortune* survey "while encouraging, are inconclusive." But economists are not pessimistic. They say: "The success of capital spending intentions as predictors leads one to hope that expectations data on stocks and sales, properly collected and interpreted, can similarly assist in forecasting inventories."

Financial Analysts would do well to keep an eye on this rapidly developing field of the economics of expectations. This volume should certainly be in their libraries.

MEN, MONEY AND MOTIVATION. By Arch Patton. McGraw-Hill: New York. 233 pages. \$7.50.

Reviewed by LANCASTER M. GREENE

Whether a Financial Analyst is to attain growth for his clients may depend on whether top level compensation of his company choices adds that plus factor all the way down the company executive totem pole.

This intriguing conundrum is well posed by Author Arch Patton, a director of McKinsey & Co., management consultants.

The pay of foremen and chief clerks is still tied to that of the wage earners.

The key functional positions in an organization possess values that vary with the economics of the business, the strengths and weaknesses of the chief executive, and the environment in which the company operates.

How are you to pay an executive



DECLARES REGULAR DIVIDEND. OPTIMISM STRESSED AT ANNUAL MEETING

The Board of Directors has today declared a regular quarterly dividend of fifty cents (50¢) per share on the Common Stock of the Company, payable June 10, 1961, to shareholders of record at the close of business May 18, 1961.

A. A. Finnell, Secretary

April 17, 1961

Rockwell-Standard serves:

Transportation • Construction
Agriculture • Petroleum
Public Utilities • General
Industry and Government

Rockwell-Standard produces:

Axles • Transmissions
Torque Converters
Leaf and Mechanical Springs
Bumpers • Cushion Springs
Brakes • Forgings • Stampings
Grating • Universal Joints
Executive Aircraft
Lighting Standards
Gas and Liquid Filters

ROCKWELL-STANDARD
CORPORATION



CORAGOPOLIS, PENNSYLVANIA

FEDERAL

FEDERAL PAPER BOARD CO., Inc.

Common & Preferred Dividends:

The Board of Directors of Federal Paper Board Company, Inc. has this day declared the following quarterly dividends:

50¢ per share on Common Stock.
28¾¢ per share on the 4.6%
Cumulative Preferred Stock.

Common Stock dividends are payable April 15, 1961 to stockholders of record at the close of business March 31, 1961.

Dividends on the 4.6% Cumulative \$25 par value Preferred Stock are payable June 15, 1961 to stockholders of record May 29, 1961.

ROBERT A. WALLACE
Vice President and Secretary

March 14, 1961
Bogota, New Jersey

MINNEAPOLIS GAS COMPANY

739 Marquette Avenue
Minneapolis 2, Minnesota

Common Stock Dividend

The Board of Directors of Minneapolis Gas Company, at a meeting held on April 19, 1961, declared a dividend of 40 cents per share payable in cash on May 10, 1961, to common stockholders of record as of the close of business April 28, 1961.

G. T. MULLIN, President

Harbison-Walker Refractories Company

Board of Directors has declared for quarter ending June 30, 1961 DIVIDEND of ONE and ONE-HALF (1-½%) PER CENT or \$1.50 per share on PREFERRED STOCK, payable July 20, 1961 to shareholders of record July 6, 1961.

Also declared a DIVIDEND of \$.45 per share on COMMON STOCK, payable June 1, 1961 to shareholders of record May 10, 1961.

Thomas Welfer
Secretary

Pittsburgh, April 27, 1961

enough to motivate him or to attract the ability essential for the success of business? Mr. Patton documents theory with examples from his rich experience as a consultant.

How are you to find that executives of a company are "running scared" as they are promoted, or merely act as though "they had it made?"

How are you to upgrade incentive for outstanding industrial performance?

Mr. Patton finds in 13 industries that the top-paying companies doubled the average profit gain and had 10 times the profit increment of the poorest paying companies.

Mr. Patton gives interesting examples of successful compensation policies—and also plans which "developed" weak companies.

A 10-year survey of 71 large companies in five major industries shows that high executive pay produced high profits.

"What are the salaries of your six top executives?," may well become a standard question asked by Financial Analysts.

Executive compensation is shown by Arch Patton to be a most important instrument of leadership.

The UNITED Corporation

The Board of Directors has declared a dividend from Net Investment Income of 10 cents per share on the COMMON STOCK, payable June 13, 1961 to stockholders of record at the close of business May 26, 1961.

WM. M. HICKEY,
President

April 18, 1961

PUGET SOUND POWER & LIGHT COMPANY

Common Stock Dividend No. 71

The Board of Directors has declared a dividend of 39c per share on Common Stock of Puget Sound Power & Light Company payable May 15, 1961, to stockholders of record at the close of business April 21, 1961.

J. H. CLAWSON
President

Annual Session on Security Markets and Security Analysis to Start in New York June 12

This year's Eleventh Annual Session on the Nature and Operation of Security Markets and Security Analysis is scheduled to start Monday, June 12, in the building of the New York Chamber of Commerce.

Presented each year, in New York City, by the University of Vermont and the New York Financial Community, the "Economics of Capital Formation" is directed by Dr. Philipp H. Lohman, Converse Professor and chairman of the University's Department of Commerce and Economics.

The six-week course (June 12 through July 21) "is designed to give students a better understanding of the social and economic functions of the institutions which constitute

the financial industry." Moreover, "it is aimed to instill in students an awareness and understanding of the contributions of the financial community to a dynamic and stable national economy. In so doing it helps to narrow the chasm which exists between the campus and the market place."

As in previous years, the 1961 course will be highlighted with lectures by outstanding men in their respective fields. The two New York stock exchanges will be visited, as well as the Federal Reserve Bank of New York and security houses.

Space precludes a complete listing of the 60-odd topics and speakers. For further information, contact Dr. Philipp H. Lohman, University of Vermont, Burlington, Vt.

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Dept. F-10 Silverton, Oregon

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Dow-Jones 'On the Nose'

At the 1960 session of the Financial Analysts Seminar at Beloit, estimates were made by the registrants of what the Dow-Jones Industrial Average would be on March 1. Eighty-six registrants turned in estimates. They ranged from a high of 743.13 to a low of 395.00. The arithmetic mean of the estimates was 614.07, and the median was 604.50.

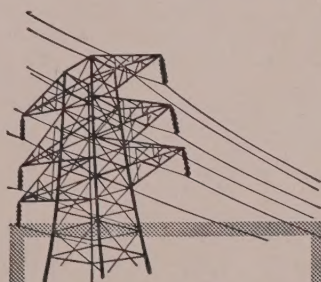
The Average closed at 663.03 on March 1. The winner of the contest, with an estimate of 660.00 was Mrs. Susan C. Cunningham, private investments, of Scarsdale, New York, a member of the New York Society. Her award is payment by the Seminar of her registration fee at the

Richmond Convention. Mrs. Cunningham is one of six women who attended the 1960 session of the Seminar.

'Clean or Cleaned?'

Perhaps it's the "rapid mobility" of the "fast buck" in the United States that makes it the cleanest. At any rate, the foreign newspaper "France Soir" reports that a French Government project for disinfecting world-wide banknotes found that the U. S. dollar is "the cleanest."

Banknotes of other countries, in order of cleanliness, were: French, Katanga (only recently a country), French African, Moroccan, Argentine, Spanish, Chinese Nationalist and Greek.



Southern California Edison Company

DIVIDENDS

The Board of Directors has authorized the payment of the following quarterly dividends:

CUMULATIVE PREFERRED STOCK:

4.08% SERIES
Dividend No. 45
25½ cents per share;

4.24% SERIES
Dividend No. 22
26½ cents per share;

4.78% SERIES
Dividend No. 14
29% cents per share;

4.88% SERIES
Dividend No. 54
30½ cents per share.

The above dividends are payable May 31, 1961, to stockholders of record May 5. Checks will be mailed from the Company's office in Los Angeles, May 31.

P. C. HALE, Treasurer

April 20, 1961



AIR REDUCTION

Company, Incorporated

AIRCO 176th CONSECUTIVE
COMMON STOCK DIVIDEND

The Board of Directors has declared a regular quarterly dividend of 62½¢ per share on the Common Stock of the Company, payable on June 5, 1961, to holders of record on May 18, 1961.

April 26, 1961.

T. S. O'BRIEN, Secretary



American Metal Climax, Inc.

COMMON STOCK
Dividend No. 142

The Board of Directors has declared a dividend of Thirty-five Cents (35¢) per share on the Common Stock payable June 1, 1961 to stockholders of record at the close of business on May 22, 1961.

D. J. DONAHUE,
Treasurer

Letters

So It Goes

Editor:

Here at Computer Research Associates we were especially interested in Mr. Conant's article on possible uses of electronic data processing in the securities market — because we are now programming securities on a somewhat similar basis.

Incredible as it may seem, we run the entire New York Stock Exchange list against an 'ideal' growth stock, project earnings and growth to 1965, and then add the chances for an increase in price. After the proper information and program, we can accomplish this task (1,200 separate issues) in about two hours. Our new program for newer computers can do this in 15 minutes.

Our thanks again for this very perceptive article!

Burton M. Moore
Computer Research Associates

* * *

Difference of Opinion

April 24, 1961

Editor:

I read with interest the article entitled "Investment Companies: Performances vs. Charges," which appeared in your January-February and March-April, 1961 issues. Since the article concludes that "consideration of past results would tend to make the authors lean toward investment in a closed-end investment company," I think it is appropriate to comment on (1), the records of closed-end companies as compared to open-end companies prior to the starting date of the authors' study, and (2), one aspect of the authors' method of statistical analysis.

First, the base date for their studies was January 1, 1942. This represents an extraordinarily favorable starting point for U. S. & Foreign Securities and Tri-Continental Corporation (which, in the authors' words, were "unquestionably the best performers"). By the same token, however, 1942 would have represented a very unfavorable termination point had the authors decided to take this date for the end of their comparison rather than the beginning. For example, the market price of U. S. & Foreign Securities was 7/8 on January 1, 1942, or about 96% below the 1929 high of 24. (No dividends whatever were paid in this period). On the same date the price of Tri-Continental was 3/4, representing a decline of about 97% from the 1929 high of 57 (after adjustment

for 75c of dividends paid for the entire period).

It would seem apparent, then, that with prices at these sharply depressed levels the 1942 base is a peculiarly favorable one for any comparison of closed-end investment companies. Indeed, the average price for the first 5 of the 10 periods compared in the article was 3-1/8 for U. S. & Foreign, and 4-1/4 for Tri-Continental, both average prices being sharply below the 1929 highs and the current prices. It goes without saying that a major factor in the sharp declines and rises was the aggressive use of leverage by both companies.

By way of comparison, open-end companies did very well indeed over this 1929-1942 period. For example, a leading common stock fund declined from \$10.17 (offering price) at the 1929 high to \$4.75 (adjusted for reinvested dividends) on January 1, 1942 — a decline approximately one-half as great as those reported above. A leading balanced mutual fund had a 1929 high offering price of \$13.89 and a net asset value of \$13.11 (adjusted for reinvested dividends) on January 1, 1942. For this balanced fund, then the price decline of 9% was less than one-tenth as great as that of the closed-end companies. The conclusions drawn from the comparative performance in this challenging period would, therefore, be quite different from those drawn by the authors.

With respect to the form of statistical analysis adopted in the article, the idea of using a series of overlapping 10-year periods from 1942 to 1960 has a certain degree of merit, since it reduces the dependence on a single base year. However, it should be recognized that the middle years (i.e., approximately 1949-1953) have a far greater weight than the early years or the more recent years. For example, the year 1951 (being the last year of the 10-year period beginning in 1942, the next to the last year of the period beginning in 1943, etc., and the first year of the period beginning in 1951) appears in all ten comparisons, whereas 1942 and 1960 are included in only one comparison. It would seem quite unrealistic to presume that a company's performance in 1951 should be given ten times the weight of its performance in 1960.

These suggestions are intended to be constructive and to point out both (1) the broad perspective gained by long term analysis over both sides of a market cycle, and (2), the need for sound statistical methods.

John B. Armstrong
Philadelphia, Pa.

Editor's Note: Mr. Armstrong was the author of "Measuring Mutual Fund Performance" which appeared in the May-June, 1960 issue of The Financial Analysts Journal.

FIFTEEN YEARS AGO IN THE JOURNAL

In order that the security and market analyst may improve his judgment, as to the state of the Nation or any of its component parts, at any given time, it is conceded that he must at least have his Ph.D. in economics, must be an expert in at least one particular industry, and must know as much as the president of any given company — and just as soon. Include some 50 separate and intertwined industrial groups, some 2,000 individual listed corporations, and encase all in our complete domestic economy; encase that again in the world picture and you have a case for the specialist.

Despite the fact that we really cannot know everything about everything, practically all advisory services and economic and market analysts do a very creditable job in bull markets, but bear markets are a challenge. Of course, the private investment counselor, serving a limited and more sophisticated group, undoubtedly can do better in a bear market than one writing for Street consumption; his shrewd judgment is rewarded only by holding the portfolio loss to less than average proportions.

But what satisfaction is there in an investment portfolio which declines less sharply than the "average" in a bear market? If superior judgment can detect the end of a bull market, then surely an all cash position is called for, rather than an average of 21% in cash and governments.

—Irving Sitt

R. J. Reynolds Tobacco Company

Makers of
Camel, Winston, Salem & Cavalier
cigarettes
Prince Albert, George Washington
Carter Hall
smoking tobacco

QUARTERLY DIVIDEND

A quarterly dividend of 65c per share has been declared on the Common Stock of the Company, payable June 5, 1961 to stockholders of record at the close of business May 15, 1961.

WILLIAM R. LYBROOK,
Secretary

Winston-Salem, N. C.
April 14, 1961

Sixty-one Consecutive Years of
Cash Dividend Payments



"Go and look behind the ranges..." *Kipling*

The sun never sets on the oil seekers—the restless men whose rock hammers, seismographs and drill bits must find the oil the world wants. Growing demand for petroleum energy sends them roving the remote areas of the globe. Here two Sinclair geologists scout above the Arctic Circle in Alaska.

Last year Sinclair subsidiaries sought new oil and gas in many places. They found new fields in the

U.S.A., Canada, and Colombia. They were encouraged in Somalia, hopeful in the Sahara. In 1960, despite import and other restrictions, Sinclair's liquid hydrocarbon output rose to the second highest point in history. Natural gas production set a record.

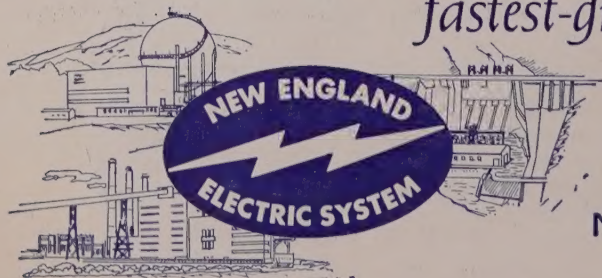
Petroleum continues to be our prime energy source. Through its oil seekers, *Sinclair is storing up reserves to meet the future's insatiable demand for energy.*

AAPG—Sinclair salutes the American Association of Petroleum Geologists for furthering knowledge of the earth's history and its application to petroleum prospecting. Founded 44 years ago, the AAPG—through its 15,000 members—stimulates testing and standardization of geologic procedures and encourages education in its field, thus helping build essential energy reserves.





It's the living that makes New England so special. The kind of good living that attracts able people and makes New England one of the prosperous areas of our country, the home of four of America's six fastest-growing companies. Come join us in good living!



NEW ENGLAND ELECTRIC

"SERVING TWO AND ONE-HALF MILLION PEOPLE IN A REGION WHERE DIVERSIFIED SKILLS BRING SOLID GROWTH."